Long Island: Playing a slow game of catch-up

May 14, 1979

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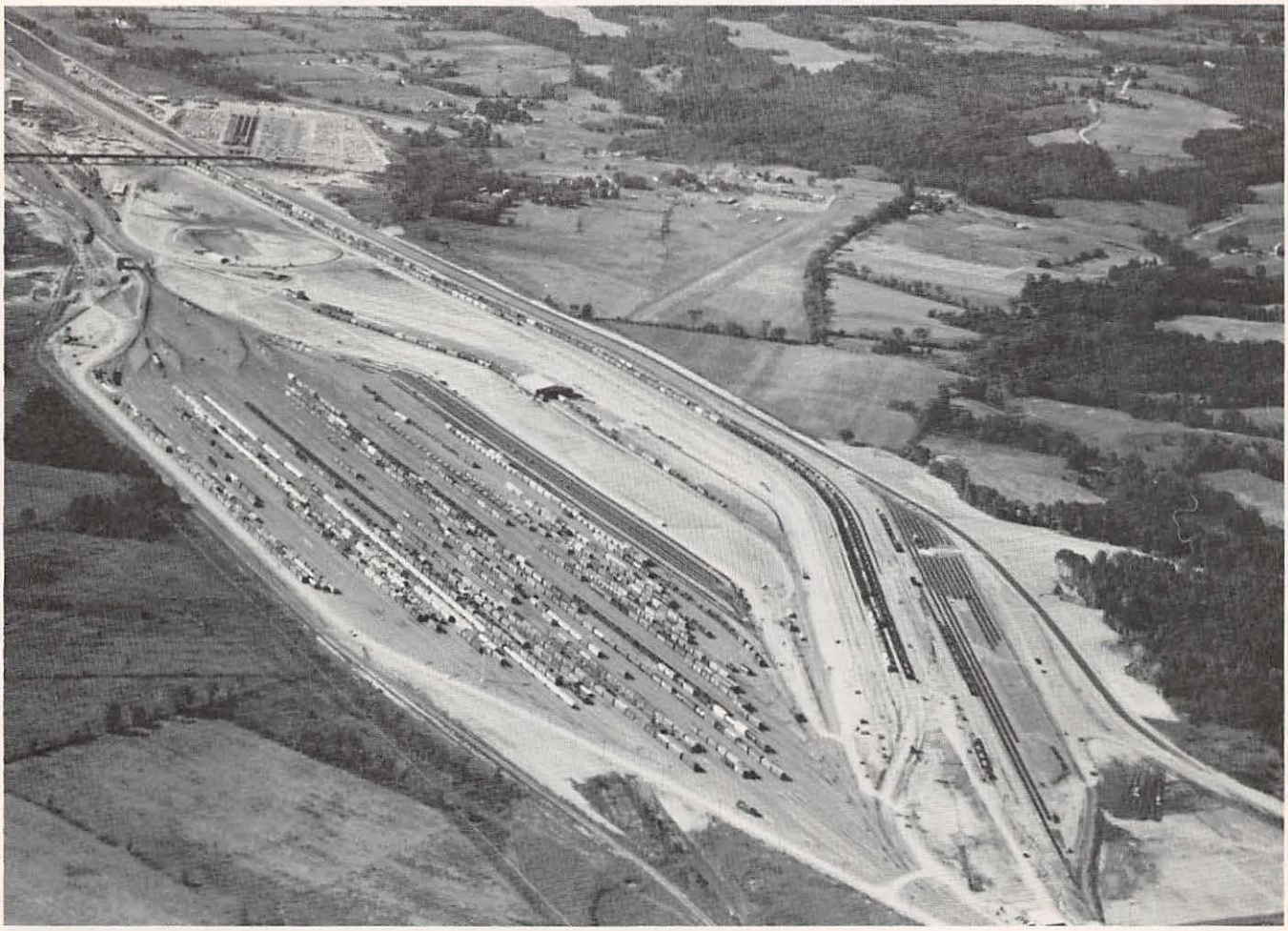

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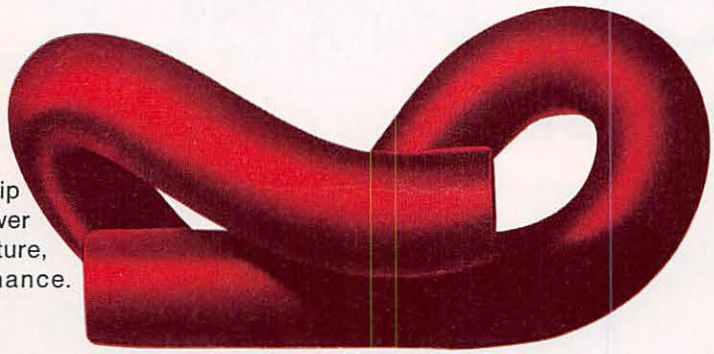

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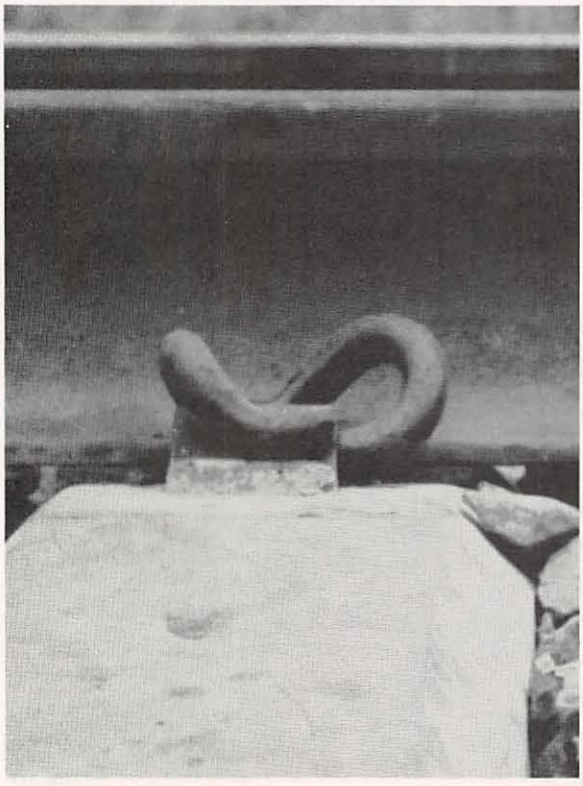

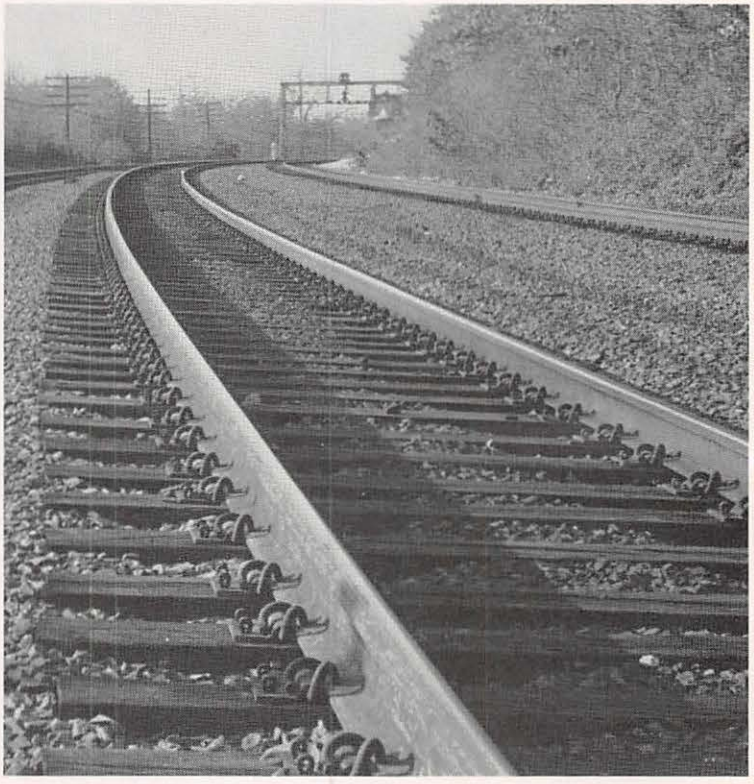

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RAILWAY AGE

May 14, 1979

FEATURES

Cover article, page 20

20 The grain trains: Food for the world

With grain exports zooming and rail movements spreading through the year, railroads need more motive power, more and better-used covered hoppers, innovative grain-train operations, and some regulation changes to meet future demands.

28 FMC: Riding the freight-car boom

Moving up fast in carbuilder ranks, FMC's expanded rail shops turned out 5,000 cars last year and are shooting for 6,000 this year.

32 LIRR: A slow game of catch-up

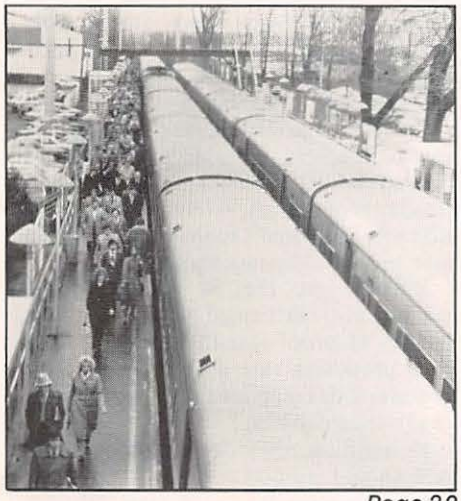
President Francis Gabreski, a commuter himself, admits the Long Island's service "stinks," but the WWII and Korea ace is back in combat, leading a campaign to put things right on the nation's biggest commuter railroad.

38 Chicago: RTA renovates a commuter fleet

By 1981, all 246 former C&NW cars will be rehabilitated with the hope of adding 15 years to their now two decades of service.

41 Grade crossings: The closure option

The Chicago South Shore & South Bend finds that closing grade crossings benefits both the public and the railroad. An executive tells how they go about it.



Page 32

NEWS

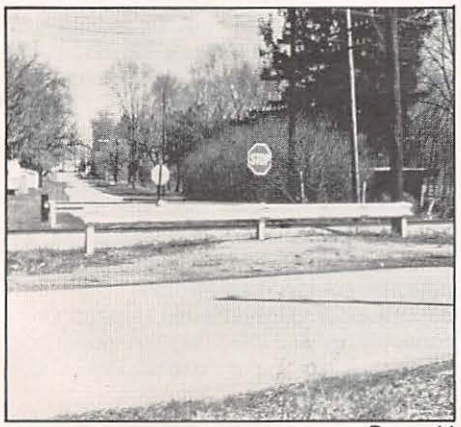
4 Short and Significant
8 Deregulation: NITL snubs DOT proposals
10 Watching Washington
12 Detroit: Another look at light rail
12 Ingalls to build cars for North American
40 Moving People
48 The Railroad Market

COMMENT

3 Inside
12 Lines on Labor

DEPARTMENTS

48 Carloadings
54 New Literature
46 100 Years Ago
52 Products Report
47 Suppliers
53 Guide to Advertising



Page 41

COVER: Mid golden grain, a BN car loads up at a country elevator.

Deregulation: NITL snubs DOT proposals

Who needs railroad deregulation? Apparently not the shippers. At least, that's the message going to Congress after the National Industrial Traffic League's special meeting in St. Louis April 24-25.

Votes on proposals dealing with national transportation policy, rate issues, rail service, rail entry and exit, and rate bureaus reflected the concern of NIT League members that deregulation proposals such as those of the U.S. Transportation Department offer little or no protection for shippers. They did so by reaffirming, and in some cases calling for tightening, of Interstate Commerce Commission authority in many areas.

For the NITL, the commission is and should remain a "convenient, fair, and knowledgeable forum for regulation," according to Donald Boyes, league president and Reynolds Metals Co. transportation director.

Even opinions that seemed to agree with DOT were carefully worded. For example, in supporting, sort of, the discontinuance of general freight rate increases (proposed by the ICC as well as DOT), shippers voted to amend the NITL policy to read: "The league opposes the use of general freight rate increases for profit improvement purposes." Rather than be uniform and across the board, the league says, rate increases "should relate the additional revenue produced to the type of traffic, as well as the commodities of major commodity groups, so that each bears its proportionate share of the carriers' overall revenue needs."

Those needs, of course would be determined by the ICC for individual carriers or groups of carriers, after consideration of "proper supporting evidence" that the increases are needed and in "full compliance" with the Interstate Commerce Act.

Aimed directly at one major DOT proposal was a vote to reaffirm league policy on mandatory through routes and joint rates: The league will support legislation authorizing the ICC to require the establishment of through routes and joint routes within and between various modes of transportation. (DOT has recommended repeal of ICC's authority to compel joint rates.)

Also squarely opposed to DOT was a vote to recommend that the Interstate Commerce Act's prohibition of higher charges for shorter distances be retained. Previously, however, there had been some consideration of a proposal for loosening that prohibition, with strong burden-of-proof requirements for carriers. A league policy statement says the executive committee's vote was close between modifying its stance and supporting the prohibition without change, but that "the ICC has been liberal in granting numerous exceptions."

The members also approved a proposed amendment to the IC Act requiring the ICC to establish a standard for measuring "honest, economical, and efficient management" when determining adequate revenue levels for carriers. The ICC should also require carriers to "obtain productivity improvements that would be considered by the commission whenever carriers request increased rates," voters decided, although the executive committee on rail and motor carrier legislative proposals had recommended that such a requirement be rejected.

"The league opposes the use of general freight rate increases for profit improvement purposes."

While there were many dissenters, another proposal was passed calling for continuance of ICC authority to set maximum or minimum rates, subject to the amendments for management measurement and productivity improvement.

(However, ICC minimum rate authority for bulk commodities and exempt traffic could be eliminated, subject to "preservation of orderly rate procedures.")

There were no dissenters to proposals for ICC retention of market dominance determination and "continuing review of the concept of market dominance to insure that ICC regulations implementing market dominance provide an equivalent of effective competition for protection of the shipping public."

Reflecting consistent league opposition to no-suspend rate zones for any carriers, voters approved specific prohibition of establishment of such zones by the ICC. (DOT has proposed that ICC authority to initiate its own investigations be eliminated, along with its power to suspend rates.)

"The league's belief has been that competition should set railroad rates where effective competition exists," the policy statement says. "However, where it is found that market dominance exists, shippers require protection from unreasonable rates. A rail no-suspend zone not subject to market dominance does not provide necessary shipper protection."

A smidgen of freedom was called for in the vote for continuing ICC exploration of situations where exemption from rate regulation of other modes may warrant greater pricing flexibility for railroads trying to compete for the same traffic. But here, too, there was a caveat: "based on a record to which shippers have been able to provide input" related to reasonableness of rates.

The voting on rate issues reflected an earlier vote for a new preamble to the Interstate Commerce Act specifying a national transportation policy that would, among other things, "encourage competition between modes of transportation as well as among carriers of each mode at charges *not less than reasonable minimum charges nor more than maximum reasonable charges.*" And that, the proposed new preamble says, would lead to technical innovation, new rate and service techniques, increased operating and managerial efficiency, and the "highest standards of service, safety, economy, efficiency, and benefit to the transportation user and the ultimate consumer. . . ."

Shippers at the St. Louis special meeting also reaffirmed NITL policy that burden of proof should be kept on carriers proposing rate changes, unless the protestant or complainant is also a carrier or group of carriers.

In addition, they decided that the IC Act should authorize railroad contract rates, providing that such rates "do not unduly impair a railroad's performance of common carrier obligations." But that authorization would include publishing and filing of contract-rate tariffs, and such exposure is viewed as a deterrent to pursuit of those agreements.

As for rail line abandonments, there was a vote that the league should modify its position "to support upon a showing of continual financial loss, the elimination of railroad exit regulations on a gradual basis, provided that adequate notice of not less than 240 days (DOT: 30 days) is afforded to affected shippers and communities and that they are provided an opportunity to purchase the line at net liquidation value."

As for rail line mergers, the league voted its opposition to shifting responsibility to the Justice Department, as pro-

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Watching Washington

For DOT, a cold shoulder in St. Louis

As the special meeting of the National Industrial Traffic League droned on, these comments were overheard in the hotel coffee shop:

First-time attendee: "Would it be fair to say that the NIT League has not budged at all on deregulation?"

Veteran attendee: "No, I think it would be fair to say that the NIT League has *barely* budged."

It was noon of the second day, and the seemingly endless discussion of railroad issues, carried over from the first day, had finally ended. The veteran attendee may have been referring to that morning's vote for repeal of Interstate Commerce Commission authority over car service. In one of the few shows of hands needed to clarify a voice vote, there were 179 "yeas" versus 117 "nays" for leaving the matter of car service to railroad management—but only after amending the original recommendation of the special committee on rail and motor legislative proposals to read, "except in a national emergency."

The vote reflected a dialogue that had taken place the day before between John J. Fearnsides, deputy undersecretary of transportation, and a traffic manager who complained about bad service on a 60-mile move.

Fearnsides: "Did you get the ICC to get them to move the cars?"

Traffic manager: "Well, that'd be a waste of time."

Besides representing the barest of budges (ICC itself has proposed a relaxation of its car service rules), the vote was one of the few signs of shipper discontent with the commission. In almost the same breath, there was a loud, clear support for the league's continuing to oppose transfer of car service functions from the ICC to, of all agencies, the Transportation Department. Much of the voting (p. 8), in fact, seemed aimed at tightening ICC controls and fending off DOT proposals.

Before voting, shippers were visibly unmoved by Fearnsides, their designated "DOT contact," who urged them to take a hard look at the DOT plan. Deregulation would allow a "variety of rates and services tailored to the needs of individual shippers."

Fearnsides also said he and other DOT reps would be available in the hotel's "Pony Express" room to talk to shippers about deregulation. However, the DOT people spent most of the time talking to each other, and by mid-afternoon they had packed up their charts and handouts and were gone.

As they were leaving, the NITL special meeting was reaching its most dramatic point, a short-lived but lively attempt to produce a *big* budge toward *some* deregulation. It came after shippers voted for a new preamble to the Interstate Commerce Act with implicit opposition to DOT maximum-rate proposals, and for a series of proposals that would not only reaffirm ICC rate jurisdiction but in some cases make it stronger.

Tolan: "We have gone solidly to the rear"

Calling such voting "a magnificent order for more bureaucracy," Fred H. Tolan, Univar Corp. general transportation counsel, proposed that the NIT League approve full rate freedom for *competitive* rail traffic. "We have gone solidly to the rear," Tolan said. "We have now decided to give the railroads absolutely nothing." Supporting Tolan's motion, Stanton P. Sender, Sears, Roebuck & Co. Washington representative, cited previous NITL policy statements favoring deregulation and asked, "Have we provided the railroads with the opportunity to compete?" Another proponent of removing competitive traffic from the "reasonableness" requirements of the IC Act said Tolan's motion would "modify and enlighten" the previous votes.

But opponents were crowding the microphones, led by Monsanto's director of transportation, Tyrus C. Stewart. The Tolan motion was "eloquent" and had a "beautiful ring," Stewart said, "but unfortunately, it's a lot of hogwash." He added: "To make the ICC the whipping boy is asinine, because they're the most benign of the regulators."

Though not enough to carry the motion, there were many "yeas," in what would be the major example of minority dissent of the entire meeting. Later, a prominent NIT League member called the Tolan motion "unfortunate" and said it was merely a reaction to a fairly widespread feeling that the league really wasn't doing anything at its special meeting.

The debate reflected a dominant theme: "*Re*gulation, not *de*regulation" —that is, "moderate" regulatory reform, not regulatory freedom. Remove the bureaucratic obstacles to the smooth working of a proven regulatory system (for sure, don't add more by bringing in the DOT), and all will be well competitively, shippers seemed to be saying.

posed by DOT.

In the area of demurrage, there was reflection of the league's belief that the current system is not working to keep the maximum number of freight cars in circulation. Shippers voted to adopt the "basic position' that demurrage should not be used to relieve seasonal car shortages nor as an added revenue measure for carriers.

And in the area of rate bureaus (for which DOT proposes removing ICC authority to grant antitrust immunity), there were some significant decisions, as follows:

— The ICC should be clearly told and be required to approve rate bureaus subject to stated standards.

— All single-line rates should be allowed to be docketed and fully discussed by any rate bureau carrier, but cannot be voted on or agreed upon by other than a single-line carrier involved (DOT proposes immediate prohibition of single-line rate discussion).

— All rate bureau meetings shall be open only to the ICC; minutes showing the voting record on each docket shall be filed with the commission (DOT says such meetings should be open to the public, with all votes open and recorded).

— "Practicably participate" will be determined by reference to ICC filed tariffs in effect at time of a vote to determine who can vote on joint-line proposals.

— Intrastate rail rates may be docketed and handled by an ICC authorized rate bureau when the rail carrier certifies on such intrastate rate docket that there would be no impact on related interstate rail rates.

— Time limits on all docket handling for rail rate bureaus should be mandatory for all rate bureaus.

— Rate bureaus should be allowed to publish joint- and single-line rates in one or more bureau tariffs; consolidated publication of single- and joint-line rates should be encouraged.

— No rate bureau should be allowed in any way to protest or interfere with the independent notice publication of any rate or rule announced by any carrier.

The rate bureau voting was perhaps the league's clearest endorsement of its "convenient, fair, and knowledgeable forum for regulation," the ICC. Rate bureaus thus operated are seen as a major means of preserving a competitive climate in which transportation modes and carriers can be selected, and that is one of the league's expressed major needs.

In a talk preceding their deliberations, shippers heard John Fearnsides, deputy undersecretary of transportation, try to convince them that the Administration's deregulation proposals were designed for their benefit. Their voting showed that they were singularly unconvinced, except for one Fearnsides utterance: "Competition works."

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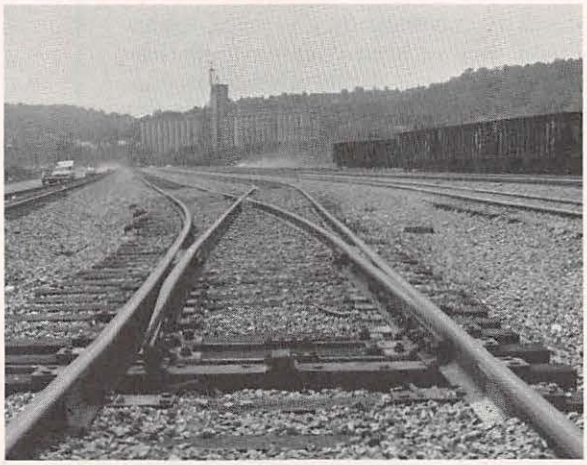

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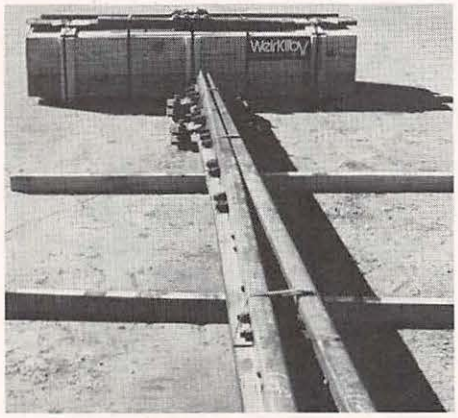

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Lines on Labor

GUS WELTY

BUT ARE THEY READY?

As one respected observer of the labor union scene recently put it, union leaders—more and more with each passing year—are talking to union members who probably wouldn't know Phil Murray from Arthur Murray. As a number of observers have noted, too, unions seem to be losing their old force, their old drive. Overall, they've been losing more representation elections than they've been winning (and that situation could be more serious even than it would appear, if you figure that no intelligent union leader will go so far as to seek an election unless he sees a reasonable shot at victory). Then, there is the matter of just how many workers unions actually do represent, and actually it adds up to only about one-fourth of the nonfarm work force. All of this leads some to say that unionism has seen its best days—that employers have gotten smarter in their handling of the employer-employee relationship at the same time that union leaders have lost touch with worker views and worker values in a changing world. This relates to the world of railroad management-labor relationships in several ways.

MANAGEMENT WORRIES; UNIONS THAT DON'T, SHOULD

Railroads have been described as the most organized of American industries, and that's either true or not far from it. What it means is that with every new-hire (outside of management ranks), a new dues payer is delivered unto one of the rail unions. What it also means is that the only union "organizing" effort comes when one union tries to take representation rights away from another, or when a union seeks to encroach on management territory. What it can mean ultimately is that union thought processes cease to be tuned in to the future. With the security of knowing that so long as there's a railroad industry unions will be protected by the union shop, thinking turns naturally to maintaining what is (for the most part) a not-uncomfortable situation. Whatever long-range thinking goes on, well, it goes on on management's side of the table, because management's worries about the future run wider and deeper. It could be added that not much of management's thinking gets a warm reception back on labor's side. Management's thinking, often, involves change, new ways of doing things, departures from traditional practice—and management's thinking, too often, simply bounces off status-quo walls that union leadership has erected. It used to be that you could blame a lot of moss-covered union thinking on the fact that many (if not most) union chiefs were old by the time they made it to the top—and maybe they had just one election to survive before they went to retirement. Now, though, that argument is weaker, because younger men have come into leadership positions—but the problem seems to remain, because age-young doesn't appear to translate into thought-young.

SURVIVAL IS THE GAME'S NAME—BUT WHOSE SURVIVAL?

Ask a few questions. Ask, for instance, who—out there in union land—is willing to take a risk. Ask, on the other hand, who—out there in union land—will take only that "risk" which has a net under it, the kind of risk that is not risk at all. Ask who—out there in union land—is concerned about changing the ways in which railroads operate. Ask who will back up such a concern with action. Ask who, and mostiy you get back the echo, "Whoooo, whoooo. . . ."

Maybe all of this wouldn't tug so much at the mind if the railroad industry hadn't done such a good job of proving its essentiality, to the point where union leadership can figure that the jobs will always be there, come what may. But are "come- what-may" jobs what today's railroad people—and tomorrow's— actually want?

Detroit: Another look at light rail

For the second time in two years, the Southeastern Michigan Transportation Authority has given a "preferred" designation to a regional transit system with a light rail core—but the rail line now envisioned is far smaller than the one that was originally contemplated.

In May 1977, SEMTA announced its "preference" for a 38.2-mile light rail system estimated to cost $2.4 billion. The Urban Mass Transportation Administration in Washington, which will be expected to pay for 80% of whatever system SEMTA decides to build, rejected that plan as too grandiose.

Another round of alternatives analysis followed, and SEMTA's board has now voted, 10 to 5, for a regional transit package that includes an 11.3-mile light rail line, a downtown people mover, expanded commuter railroad service, and bus improvements, at a total estimated cost of $1.4 billion.

SEMTA is careful with its use of the word "preferred," because there is no guarantee that its own preference will be accepted either in Washington or at home. The plan must now go through a series of local public hearings, and then to UMTA.

Ingalls to build cars for North American

The Ingalls Shipbuilding Division of Litton Industries is going into the freight-car building business. Ingalls and North American Car Corp. have entered into a $75-million agreement under which Ingalls will "assemble and manufacture" 4,500 covered hopper cars for North American, using components furnished by the car-leasing company. An initial 500 cars will go into production at Ingalls's Pascagoula, Miss., facilities in July.

"This new low-cost source of supply places North American Car in an excellent position to expand its share of the growing fleet of privately owned railcars," said James H. Ozanne, president of North American. "Railcar demand is expected to continue strong, particularly for equipment used to carry grain for export."

Len Erb, vice president of Litton and president of Ingalls, said the railcar assembly will be carried out by the company's newly formed Industrial Products division, which will be operated and managed separately from Ingalls's shipbuilding and ship overhaul activities.

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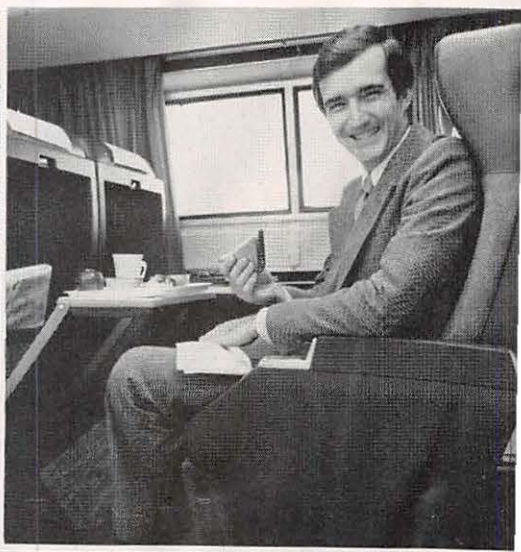

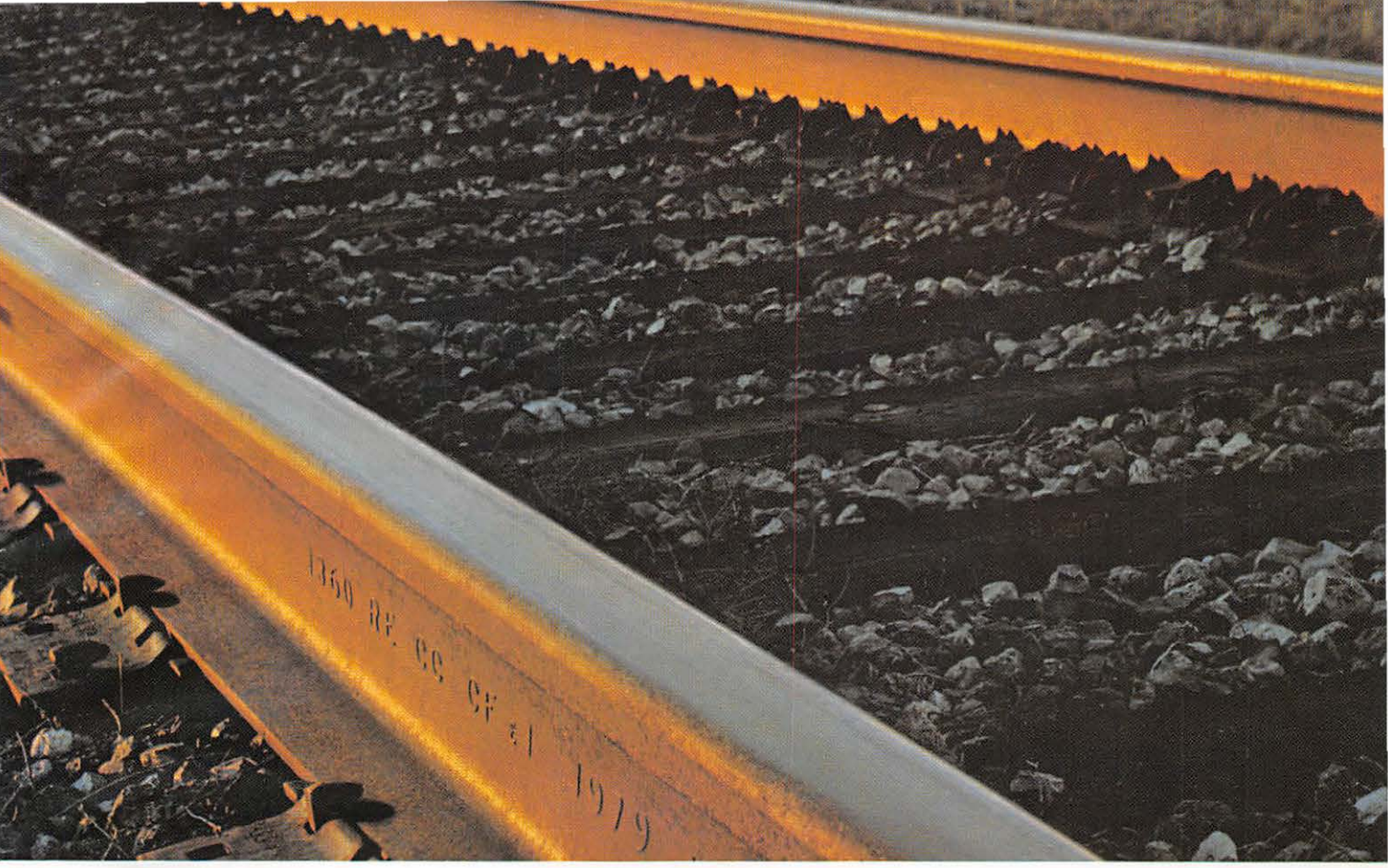

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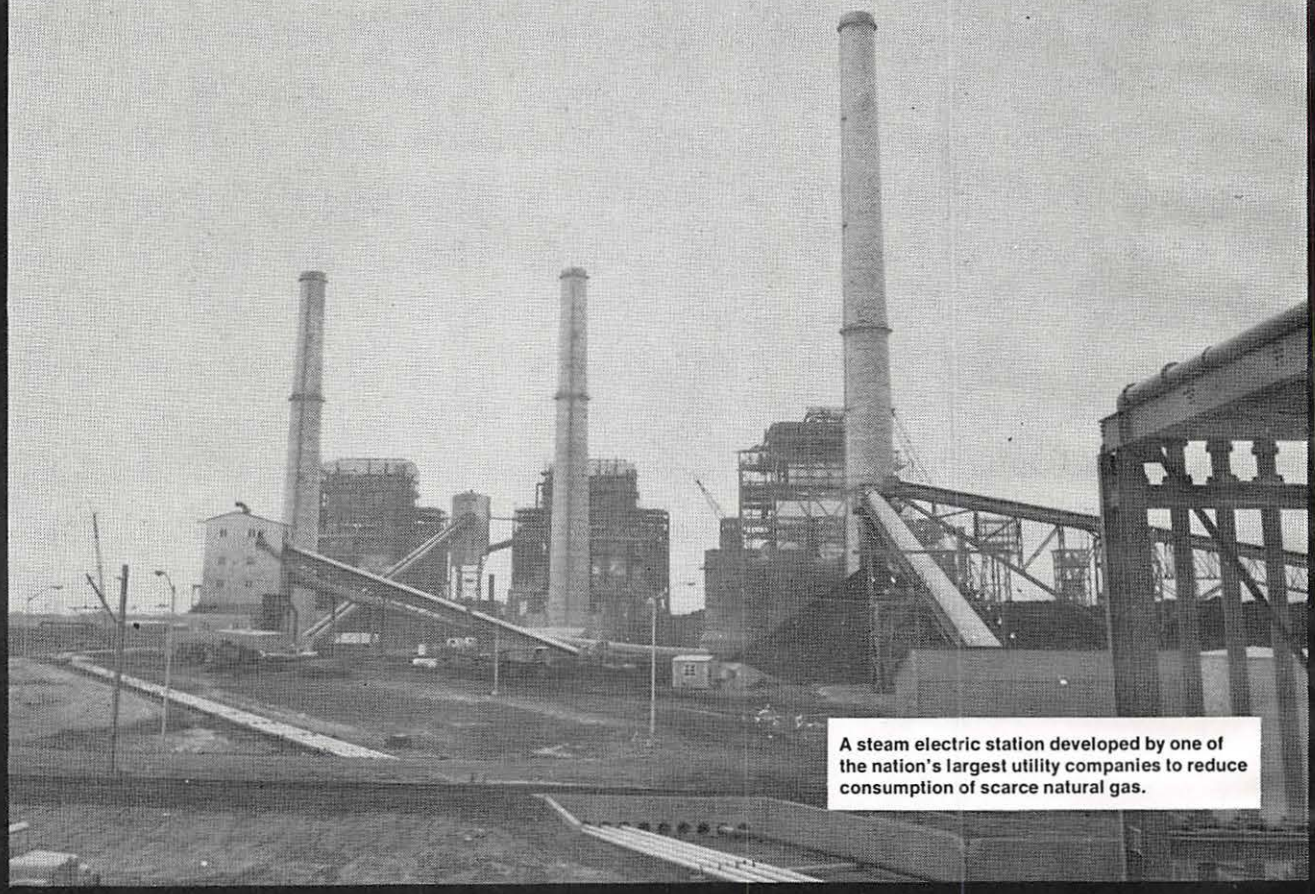

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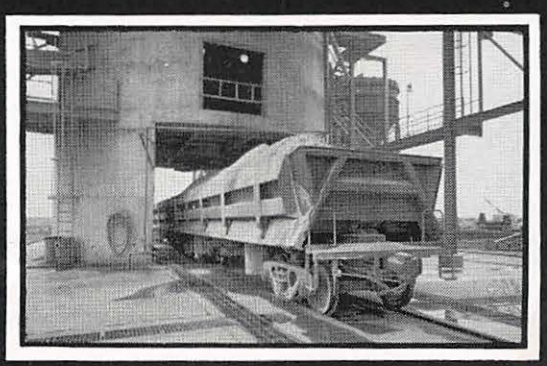

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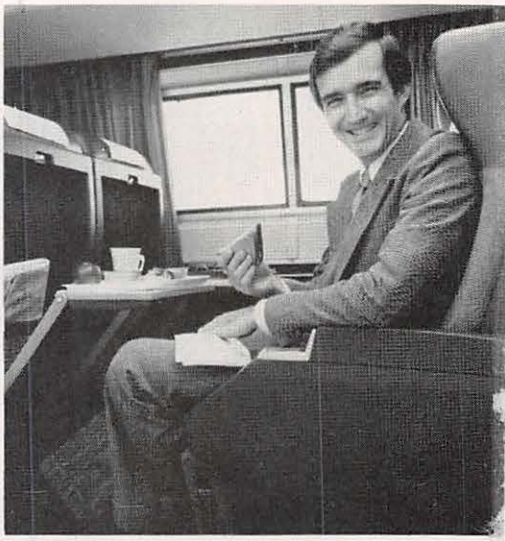

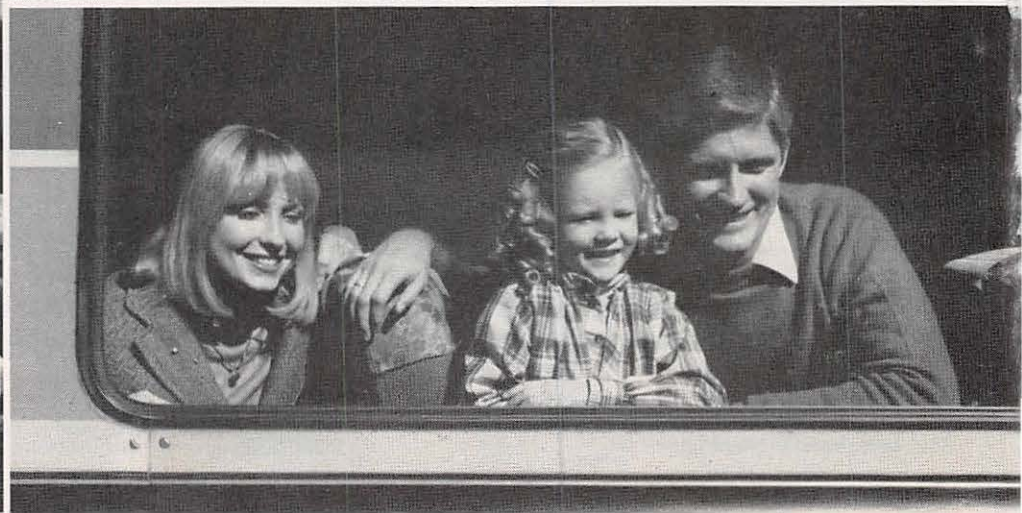

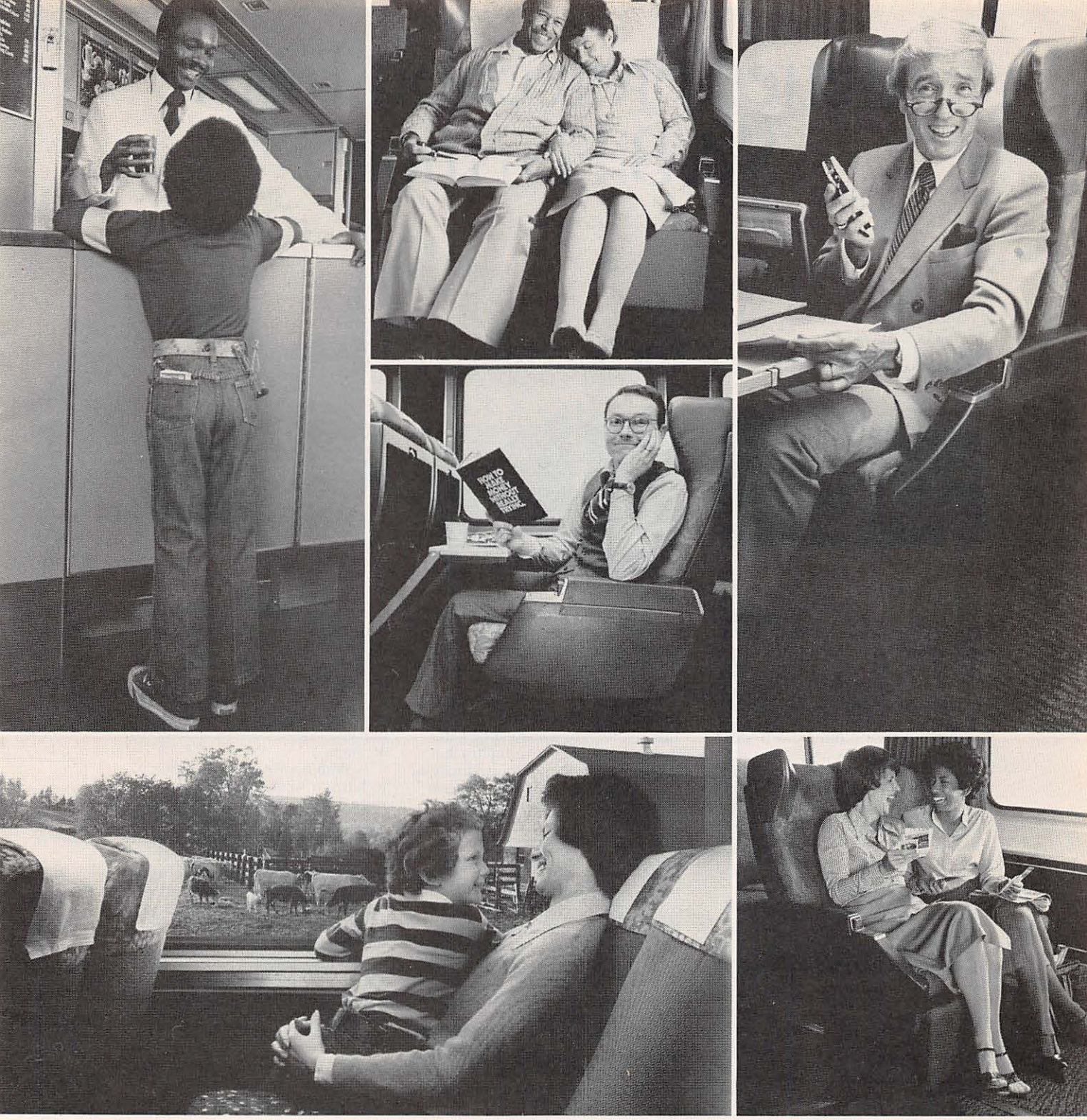

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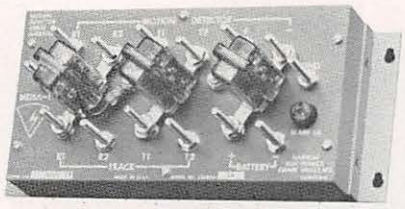

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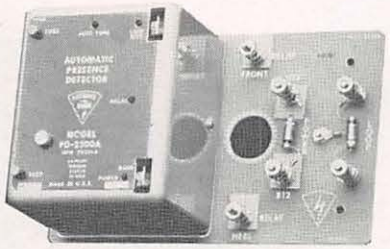

The new Harmon Automatic Presence Detector requires neither motion of equipment nor shunting of rail to detect cars or equipment within a section of track.

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Units are available for AC or DC operation, and all circuitry is on plug-in boards for easy changeout. Tuning procedure is extremely simple, and retuning is only necessary in the event of power outages exceeding one minute.

Both AC and DC power supplies are built into the units, and both units are available with or without internal relay, depending on installation requirements.

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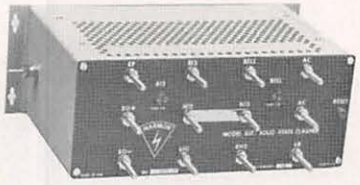

The Solid State Flasher completes Harmon's line of extraordinarily dependable crossing protection equipment. Designed to be controlled directly from the output of any electronic or conventional grade crossing system, the Model SSF1 accommodates total lamp loads to 40 amps.

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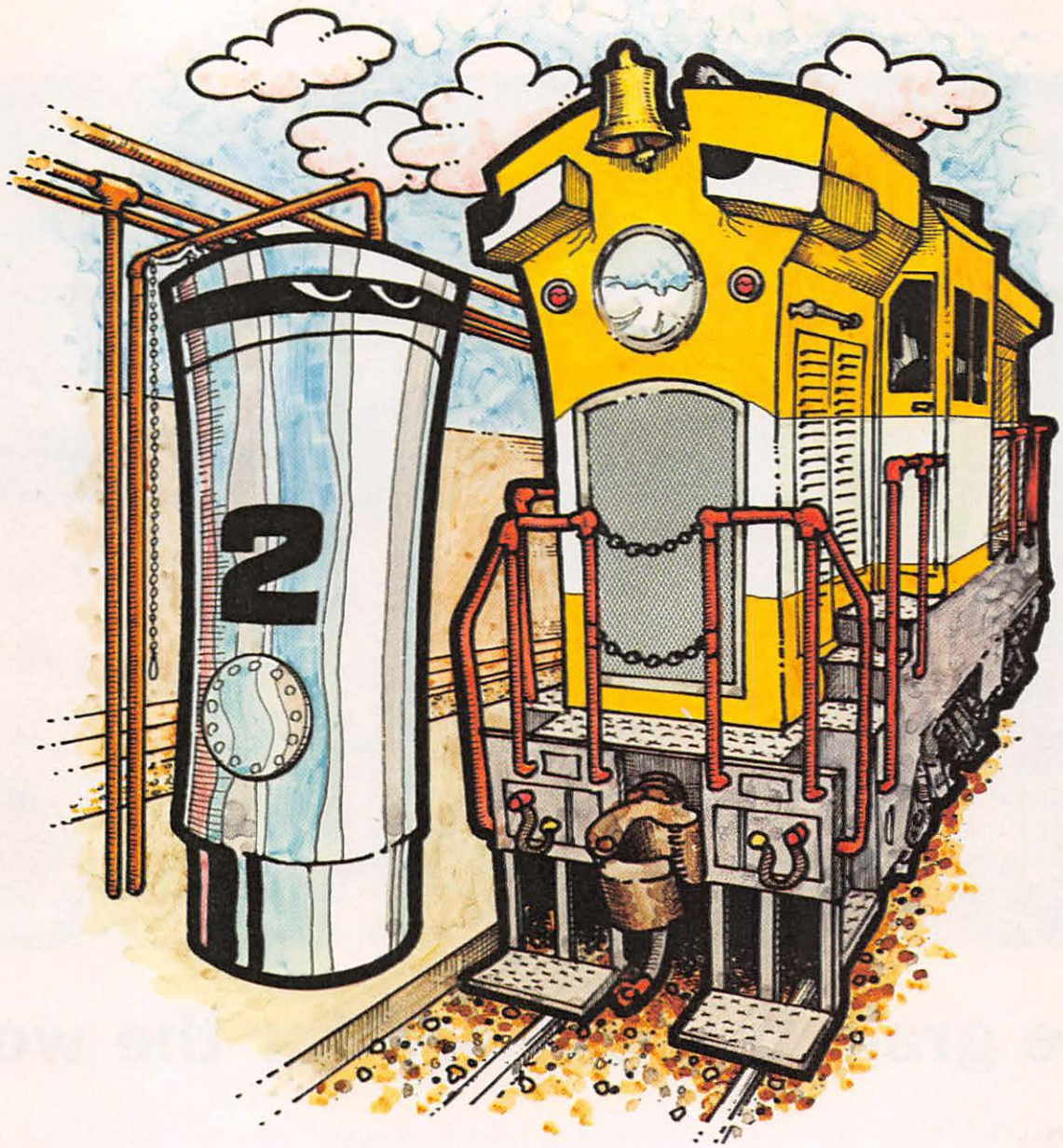

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Circle 8 on Reader Service Card

MoPac is trying out unit grain trains designed to improve equipment utilization and service to country elevators in shipments from the Midwest to the Port of Galveston.

The grain trains: Food for the world

By GUS WELTY, Senior Editor

The transportation officer raised his glass and proposed a toast: "May you live long enough to understand the grain business."

His point was well-taken; perhaps no other aspect of rail transportation is quite so far removed from railroad control, with events shaped by such diverse elements as the weather, the arm-waving and shouting of commodity traders, and the import decisions of the inscrutable Chinese. A person could indeed spend a lifetime trying to understand the grain trade and still come up short. And, while politicians make hay with strident—and frequent—attacks on railroads for doing a bad job of moving the grain, there's something truly to be said for another viewpoint: Under the circumstances, it's sometimes amazing that railroads do the job as well as they do.

It is, by any measure, a massive job—and one that will grow still further, especially on the export side of the market. Forecasts vary. One, for example, predicts a 12% increase in export grain sales by 1985 and a 60% jump by 2000; another predicts a 70% gain in export tonnage of wheat, feed grains, and soybeans by 1990. Significantly, the forecasters see exports outpacing domestic sales—with the railroads' share of the grain-transportation market growing in competition with highway and water carriers.

The question, of course, is whether the railroad industry will be ready to handle this growth. The answer is, maybe.

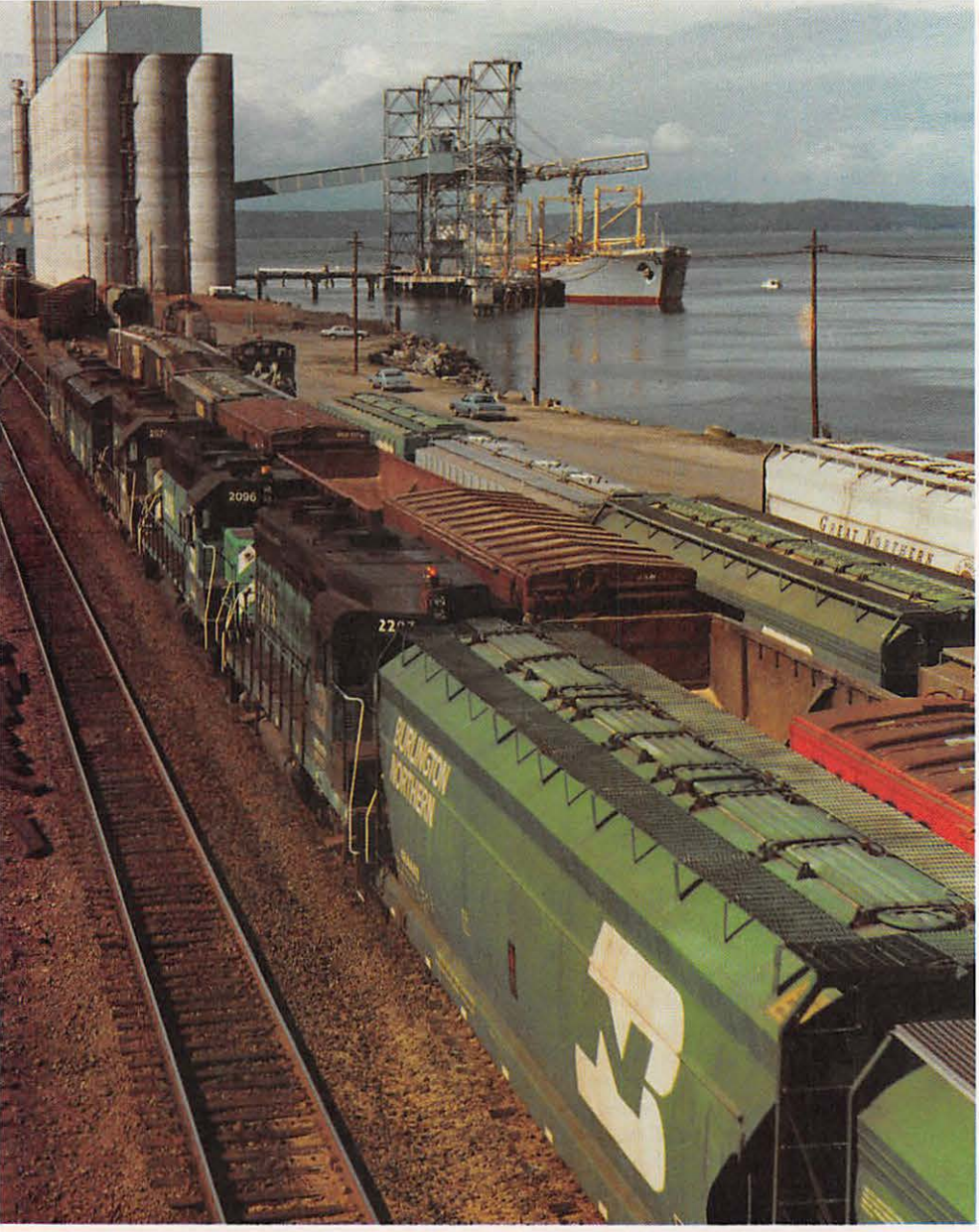
● **Some changes needed.** Right now, planners don't see any need for major changes in the basic grain-moving vehicle, the 100-ton covered hopper car, because, as one operating officer points out, it is easy to load, easy to unload, and not costly to maintain. The planners do, however, see a need for substantial increases in the number of such cars acquired by both railroads and private owners—and a concurrent need for major increases in the motive-power fleet. (For several roads in recent months, grain-handling delays were caused as much or more by power shortages as by car shortages.)

Some planners also see a need for change in the ways operations are handled. A few roads have been experimenting in this area, and the results—while not yet conclusive—look promising.

On car acquisitions, the numbers seem impressive. In 1978, orders were placed for 32,500 covered hopper cars (about 25% of the total number of cars ordered), and the year saw a net increase in the covered-hopper fleet of more than 10,250 units. On balance, too, the fleet is a relatively new one: During the 1970s, more than 110,000 new covered hoppers have been placed in service, and they now represent about 45% of all such units in use.

While those are big numbers, they may not be big enough. By one estimate, the 1978 increase in the fleet fell about 2,500 cars short of the number that will be needed each year between now and 1990 if railroads are going to be able to move the traffic that will be available to them.

As for the motive-power situation,



Special grain trains save BN up to 12 days' car turnaround time. This one, out of Omaha, brings export corn to Tacoma.

railroads are trying: The locomotive order backlog now stands at about double what it was a year ago; deliveries will be up sharply in 1979, and some roads are well into 1980 and beyond with power planning. Meantime, however, major grain carriers have been having problems, and they admit it. Santa Fe, for example, experienced power shortages earlier in the year (though its problems should become fewer, with deliveries beginning last month on 141 locomotives in its 1979 program). The nation's biggest grain-hauling railroad, Burlington Northern (with about 20% of the industry's grain carloadings), calls power shortages "critical . . . industrywide."

● **Innovation in movement.** The operational side of grain transportation is where innovation may be (1) most needed and (2) hardest to come by.

The unit grain train, of course, has been the most obvious and probably the most successful innovation, with solid trains of grain moving to the ports for export. But there are always new twists to an old trick, and Missouri Pacific and Burlington Northern, to name just two roads, have been trying a few.

A few weeks ago, for instance, MoPac ran four experimental grain trains designed to provide improved service to both large and small country elevators and, at the same time, to provide better equipment utilization. Forty grain dealers, stretched over 262 miles of MoPac line between Hoisington, Kan., and Haswell, Colo., loaded a few more than 300 covered hopper cars for the four movements that wound up at Galveston. Under the experimental plan, MoPac spotted the cars at the country elevators under a prearranged schedule; the elevator operators loaded them quickly; and they were reassembled just as quickly for movement to a central point, in this case Hoisington, for grain inspection. While samples were being analyzed, the trains were rolling, and by the time they arrived at Durand, Kan., 16 to 20 hours running time from Hoisington, state inspectors had telephoned grade reports to grain dealers. At Durand, grades for each carload were assigned; carloads of low-grade grain were switched out and moved to storage; and the trains rolled on again to the port at Galveston.

● **For BN, a turnaround payoff.** BN's grain-train program started last December, with movements from central and upper Midwest origins to Pacific Northwest and Gulf Coast ports. In this operation, BN is serving both main-line and branch-line points, with pickup from branch-line elevators either the same day or the day after the cars are spotted for loading. Even in December and January, under most adverse weather conditions, BN was achieving savings of up to five days in car turnaround time, and the numbers have become even better as the weather improved.

Through April 20, BN had operated 116 such gathering-unit trains, and it was then in the process of creating "matching" trains, trains of 52 cars that would be made up of 26 BN cars and 26 shipper-furnished cars. As of April 20, the road had run three such trains and saw good possibilities for creating nine more, which would put 12 sets of equipment into the service.

Transportation officers see the operation as a better opportunity to handle movements from one or two customers to a single destination, and the results look good: On a recent move from Motala, Neb., to Continental Grain's elevator at Tacoma, Wash., car turnaround time worked out to about 10 days—as contrasted with the 22-day turnaround time BN had experienced on some single-car shipments earlier this year.

Innovations such as these are needed for several reasons—one of which is that patterns of grain movement have changed significantly in recent years.

● **The World Factor.** Grain transportation, much like freight-car buying, used to be a peak-and-valley kind of thing. But for the past 18 to 24 months, transportation demand has plateaued at close to a peak, mainly because of exports.

If you go back just 10 years, you find that exports of feed grains, wheat, and soybeans added up to just $2.8 billion, and, as Pullman Standard President James A. McDivitt puts it, "grain exports were regarded as a way of disposing of surpluses and being charitable to the rest of the world." Then came the crop disasters of 1972-73 in the USSR and China, and "America woke up to the fact that the agricultural resources of our country are international assets of tremendous value." The result was that exports did not fall back: "Instead, they have increased at a spectacular rate." Last year, McDivitt noted, grain exports amounted to more than $16 billion, close to six times the level of 1969.

The implications are obvious. One is that export of agricultural products may be the best way of carving away at the nation's trade deficit. As McDivitt pointed out, grain exports are increasing much faster than total exports, with a good chance that by 1990 grain could account for 20% or more of all exports, up from 12% just two years ago.

The farm sector will also benefit from export growth—and so will the transportation sector. Again, McDivitt's numbers: "Somewhere between 15% and 20% of the f.o.b. value of export grain is inland transportation costs. The total annual cost of moving more than 100 million tons of grain from the farms to the ports and putting it aboard the thousands of ships needed to carry it away comes to between $2.5 billion and $3 billion. Given the prospects for increased exports, the amount will grow substantially in the next 10 years."

● **A plus, and a minus.** In a sense, greater stability in demand for transportation of grain should be a blessing, making it possible for railroads to improve operations planning and to achieve better equipment utilization.

But thus far, at least, the blessing is somewhat mixed—in part because past grain movement patterns allowed for multiple-commodity use of grain-type covered hopper cars: When the grain wasn't moving, the equipment could be placed in potash service, for example. Now, however, with the spreading out of car demand for grain, that isn't so simple, and more than a couple of transportation and car-distribution officers are more than a little nervous as they see demands becoming less seasonal and more overlapping.

BN sums the situation up this way: "The export market has changed the nature of grain movement and played havoc with the rail industry's ability to deploy its fleet. In the past, peak grain movement was during the harvest months of June through October on Burlington Northern. For five months, BN pushed to carry crops to mills or to terminal elevators, and for the remainder of the year grain moved sporadically, in smaller shipments.

"But in the past two years, the railroad industry has experienced a more constant demand for service on grain. Heavy overseas buying has buoyed prices and encouraged farmers to increase production. Moreover, farmers have added storage capacity and are using more sophisticated marketing techniques to hold out for better prices. As a result, grain is moving year-round.

"This, in turn, has strained the rail industry's ability to handle all of its freight business. Car scarcities develop as the demand for covered hopper cars and boxcars extends past the harvest season and into months when carriers ordinarily would be using their grain equipment to move other commodities."

Other roads would likely agree with BN's assessment—with only the demand-time periods changed to reflect earlier harvests farther south. And while the spread in harvest times makes it possible to move equipment north with the harvest— much as farm equipment itself follows the harvest—even this is not the "solution" it once was on an overall basis.

● **The statistical picture.** What do the industry numbers show? Among other things, that a downtrend in grain carloadings was suddenly reversed last year, with loadings going up by about 8%. And despite persistent car shortages, railroads could point with some pride to the way they handled the increased demand, especially in view of the demand pattern of '78: In the first quarter, with operations hampered by winter-weather problems, grain loadings were 6.5% under the levels of 1977 and a whopping 42% under the three-month loadings hauled in the record grain year, 1973. But in the last nine months of 1978, loadings ran 13% above those for the same period of '77. Perhaps most significant, grain traffic for the April-December period last year was only a shade below that of record-year '73—and it was handled far more smoothly than in '73 when, one transportation officer recalls with little enthusiasm, "we had loaded grain cars backed up all the way from the Gulf to Kansas City." Significant, too, is the fact that the export grain volume moving south by rail in '78 was handled smoothly despite loss of a certain amount of port terminal capacity when elevator explosions put several facilities out of operation.

Obviously, all concerned learned something from the problems of '73, about the need for better coordination involving rail, terminal, and ship operation. "Smooth" is still the word in '79; Santa Fe people, for example, note that terminals at the ports of Houston, Galveston, and Beaumont are doing extremely well in unloading grain, with railcar backups insignificant and in some cases nonexistent.

With the upturn in loadings last year, rail increases in volume and revenues were widespread, though the rates of growth varied. For example, farm products including grain continued to be Santa Fe's biggest volume-producer, with grain up 3% for the year. For BN, meanwhile, grain revenues climbed 28% and accounted for 13% of gross freight revenues, on volume of more than 19.6 million tons of whole grains and seed. Union Pacific moved more than 13.3 million tons of farm products including grain in '78, and for UP it was a year of expansion in movement of Asia-bound corn and sorghum. The volume of such export traffic, moving to the West Coast in 25-, 50- and 75-car units, more than tripled. There were other indicators of growth: Chessie System's 14% increase in export grain tonnage; Family Lines' grain-revenue increase of better than 19% on a volume increase of almost 5%; Missouri Pacific's 16% jump in ton-miles accounted for by grain, which remains MoPac's second largest revenue producer.

Soo's 41% rise in grain shipments last year has

● **Then there's Soo.** Some of the highest numbers for grains were recorded by Soo Line: Shipments from country elevators last year were up 41% from 1977 levels and more than 70% from '76; revenues from farm products increased 47%, or $18.5 million including a $13.2-million boost in wheat revenues alone; and farm-product revenues went from 18% of total revenues in 1977 to 23% last year, boosting farm products past chemicals as the road's No. 1 revenue-producer. This year the trend seems to be continuing: For the first quarter, other major traffic categories showed lower loadings, but Soo Line's grain carloadings were running 13% ahead of last year.

For the industry as a whole in '79, grain loadings for the first 15 weeks—perhaps reflecting an even tougher winter this year—were lagging behind 1978 by about 2.5%, with the totals up in the East, down slightly in the South, and down somewhat more than slightly in the West. There seemed to be little real pattern to some of the figures. In one recent week,

made farm products its No. 1 revenue producer.

for example, among eastern roads, Chessie and Conrail were up, but Norfolk & Western was down; among southern carriers, Illinois Central Gulf and Southern were up, but Louisville & Nashville was down; among western lines, Union Pacific, Soo Line, and Rock Island were up, but Santa Fe, Burlington Northern, Chicago & North Western, Milwaukee Road, Missouri Pacific, and Frisco were down.

As for the long-range future, a few things seem certain, especially regarding the export market. One is that there is no lack of agricultural production capability. A second is that the grain will in fact sell on the world market, not just in years of overseas crop failures but consistently, as world population grows and demand builds up on the international market for the U.S.-grown feed grains needed to meet increasing worldwide demand for meat and meat products.

● **Continuing complexities.** Less predictable, in grain distribution generally, are the prospects for much change in the way that distribution is handled. The whole marketing structure *is* complex, perhaps more than it needs to be, but it's a structure that has grown up over years and years—and many diverse groups have found in it a way to make a living.

In rail transportation specifically, operating people and others concerned with costs would hope for greater efficiency in the broad area of grain sampling and inspection and diversion which would lead to reduced switching, reduced car delay, and improved car utilization. Many transportation officers, no doubt, would also like to see changes in the way transit works, changes that would also promote greater efficiency from their standpoint—but here, they tend to run head-on into opposing viewpoints held by their traffic people.

Railroads can do their own thing to work more efficiently once motive-power shortages begin to ease. It's perhaps unfortunate but generally true that when power is short and something has to be held, what's held will not be a TOFC/COFC train or a unit coal train moving on a precise cycle, or a hot-shot merchandise train; what's held may well be a grain train, and while the delay often may not be critical in terms of meeting a delivery (a ship arrival, for instance), it does result in the tying up of expensive, much-in-demand railcars.

Other changes from within and from without? They could happen.

For one thing, some pressure is being applied to get a change in AAR regulation OT-5, which has to do with originating-road approval for shipper-furnished equipment. If this rule didn't exist in its present form, some believe—Pullman Standard's McDivitt among them—"shippers would have acquired more covered hopper cars in the past . . . and they would acquire even more in the future." His argument: While you can't minimize the concerns of the carriers, you also can't ignore the problem of the industry's not having enough capital to do everything that ought to be done. A solution for a large part of that problem, he believes, lies in "outside sources of capital. . . . These sources could become much larger and more significant if they are freed from unnecessary restrictions. I recognize that having railroad-owned cars and shipper-owned cars exist side by side does create some problems in terms of use priority. But these problems can be solved, and they are clearly minor in comparison with the benefit which a massive infusion of outside capital can bring to the railroad industry."

● **What course for the commission?** As McDivitt notes, this industry regulation matter has been brought to the attention of the ICC, but meanwhile ICC has been doing its own twisting and turning.

Last year, for example, the commission appeared to be thinking in terms of actions that would have a detrimental and not a beneficial impact upon car supply, as many saw it. Among other things, ICC was looking at performance standards that would be backed up by reverse demurrage and penalty per diem, at elimination of unit-train operations during car shortage periods so that small shippers could be better served, and at a request for authority to force railroads to acquire equipment just to protect peak-period demand. This was too much even for FRA, and Administrator John M. Sullivan made that clear. With particular reference to the unit-train breakup proposal, he noted that while ICC thought it had a point in trying to equalize the impact of car shortages, "we do not believe they should penalize efficient, economic rail service. . . . The new proposal would hurt railroad efficiency even more [than recent car-service orders] by slowing down total grain movements."

FRA's administrator also took issue with another ICC suggestion, that railroads should be "encouraged" to provide more short-haul service to interior river points for transloading of grain into barges. That might improve turnaround time on rail cars, Sullivan tended to agree, but railroads would be placed in a position of being denied long-haul revenues and trainload efficiency at a time when barge operations themselves may be limited by a lack of capacity. Clearly, the shippers' choice of transportation should be the result of healthy competition between the modes and should not be affected by these kinds of government-imposed market constraints."

That was strong stuff, aimed from one government agency at another, and it won applause from those who figured that the commission was following an old bureaucratic theory that if the private sector can make something work, then there must be something wrong with it.

But then, just a few weeks ago, ICC itself made what had to be a surprising move—issuing a notice of proposed rulemaking that would consider the elimination of all or some mandatory car service rules, with special attention to be paid to Rules 1 and 2. ICC, it appeared, had been looking at the result of its own actions—and at the effectiveness of Railbox and the so-called Clearinghouse project. And, ICC said, those approaches providing tools of free-running equipment "have been effective in improving car utilization and demonstrate the advantages associated with relaxation of restrictions imposed by car service rules" such as those requiring return of empties to home roads if they could not be loaded in the direction of the owner line. In mid-April, ICC asked for comments to be delivered by mid-June and, no doubt, it will get comments, and nobody can say at this point what the commission will eventually decide to do. But it has to be regarded as significant that ICC is even thinking in terms of "relaxation of restrictions" and the turning back of car-distribution powers to the industry itself.

May you live long enough to understand the grain business? Maybe you'll never fully understand it—but with the thinking that's going on today, maybe railroads will play the larger and more effective role that they should play in it. Maybe? If the projections are correct, railways will have to play that role. ■

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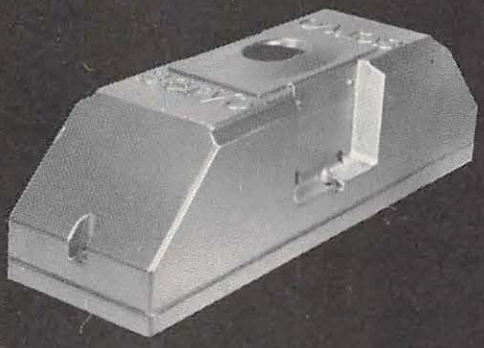

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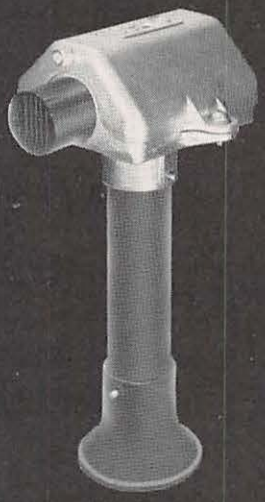

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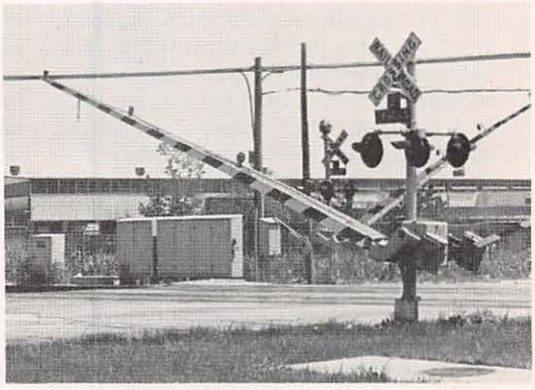

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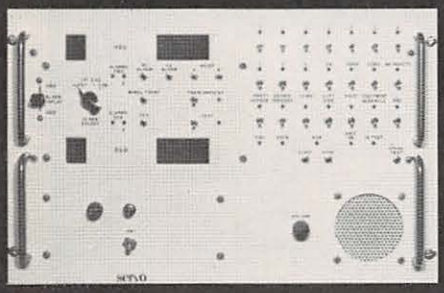

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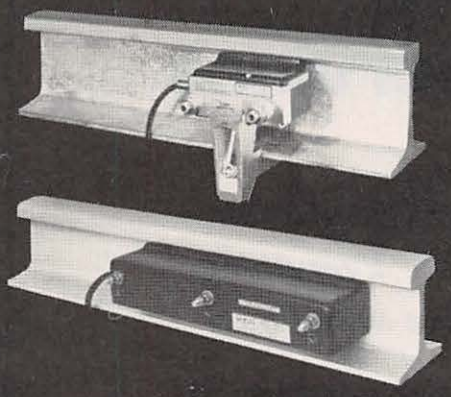

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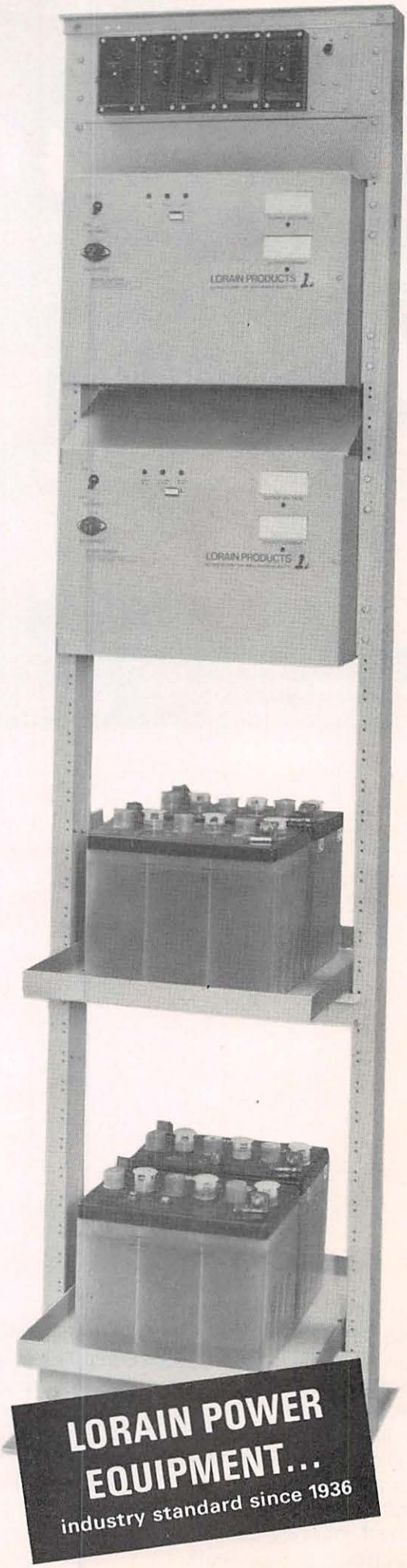

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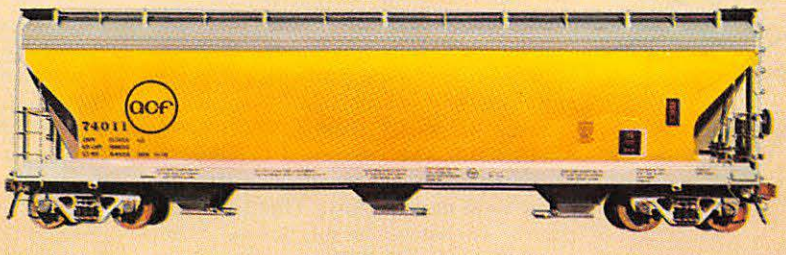

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Finish-painted boxcars ready for weighing on the track scale (right) at the new finishing bay of FMC's Portland, Ore., carbuilding plant.

FMC: Riding the freight-car boom

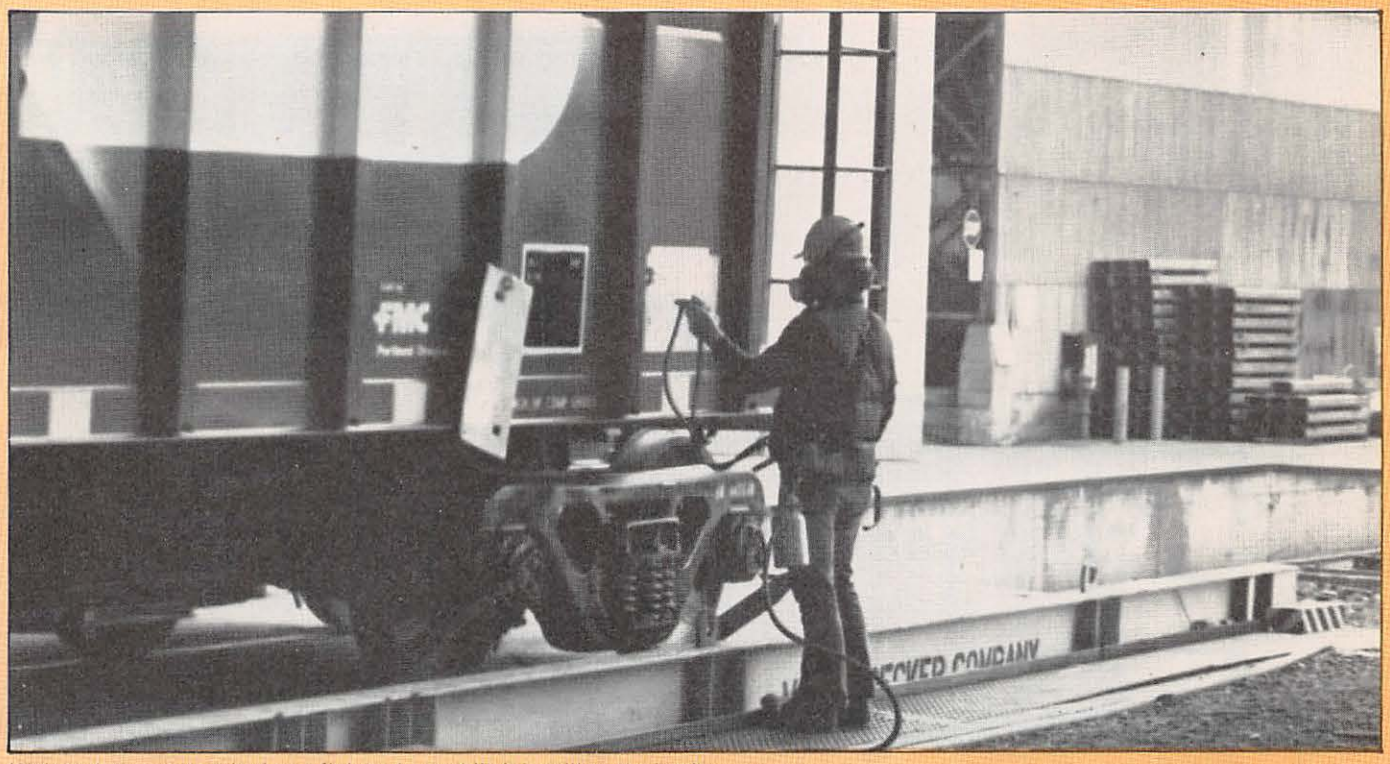
In these boom times for freight-car construction, it's not hard to come by success stories—but one of the biggest still has to be the one being played out on the banks of the Willamette River in Portland, Ore., at the expanded shops of FMC's Marine and Rail Equipment Division.

It wasn't so long ago that the shop was known as Gunderson Brothers, and it was more or less a job shop, scratching around for orders from a few western roads. Then FMC acquired Gunderson, and it went through an abortive effort to put a shop into the East. Gunderson, of course, was known mainly for its marine construction, and FMC was a widely diversified corporation, so most observers probably didn't figure on FMC's becoming a major force in carbuilding.

But last year FMC delivered 5,004 new freight cars and received orders for 11,717 cars; its backlog as of Jan. 1 stood at 10,021 cars. Those numbers mean that FMC ranked fourth among all carbuilders in 1978 deliveries, fourth in '78 orders, and third in new-year backlog, trailing only Pullman Standard and ACF in terms of cars on order and undelivered.

If 5,000 cars was a total that the division sweated out in '78 (eventually topping it by four cars), consider that its production goal this year is 6,000 cars—but, as one FMC officer put it, "if we respond as we did in '78, this year will seem like a piece of cake."

One major thing FMC has going for it is its recent 50% increase in capacity with the addition of a second production line. Though the plant has the capability for building a wide variety of car types, last year's production was concentrated on boxcars, with the exception of 375 covered hopper cars; orders placed in '78 followed a similar pattern, with the addition of a few hundred gondolas. Patterns, on both orders and deliveries, followed the trend: Almost 64% of orders came from nonrailroad buyers, while close to 70% of deliveries went to private buyers, Itel and Railbox. While western roads continue to be FMC's biggest railroad customers—Burlington Northern, Santa Fe, Southern Pacific, Rock Island, and Western Pacific among them—FMC also had one customer about as far away as a customer could be—Maine Central. ■

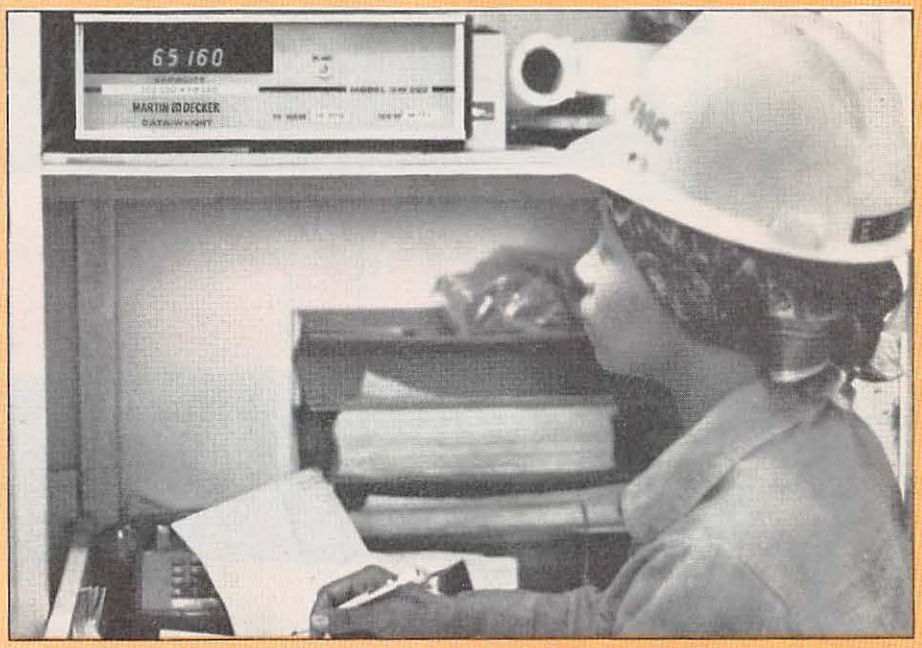


Weight data are stenciled on a finished car while it is still on the scale.

A "weigh-out" for future expansion

With FMC's expansion to two full car-building lines, production all comes together in a new railcar finishing bay, a six-track facility served by transfer tables and mobile car movers for painting, stenciling, inspection, and weigh-out. Weigh-out turned out to be something that required a rather specialized treatment, because FMC wanted not only fast, efficient, and accurate weighing capability but also what would amount to portability: The division may just have completed one expansion, but it was looking down the road to possible future expansion and it did not want to be locked in with a permanent, pit-type scale.

The way for weighing turned out to be installation of an 80-by-12-foot Martin-Decker "Eliminator" electronic track scale, a design that requires no pit. As installed at the Portland shop, the scale, made up of three bridge sections, utilizes eight 60,000-pound-capacity load cells mounted to the platform by a special cross-link assembly that allows the scale to operate by tension rather than by compression measurements. For readout in the scalehouse, a Martin-Decker DW-550 unit provides digital display and a DW-103 printer provides a ticket printout; the digital indicator uses time-based averaging which, the manufacturer says, will provide a jitter-free readout even if there's motion on the scale itself.



Meanwhile, weighmaster in the scalehouse gets a digital readout and a printed record.

And if FMC expands its carbuilding operation still further? Moving the scale should be no problem: All that will be needed is the pouring of a new concrete slab (or merely new concrete supports under the load areas), movement of the platform by crane, and then attachment of the platform to the load cells and stands; once the slab or supports have been poured and cured, the scale deck and the electronic gear can be moved and positioned—and in two days the scale will be back in operation.

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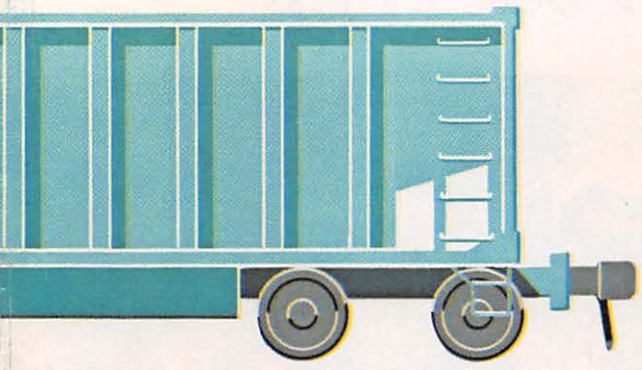

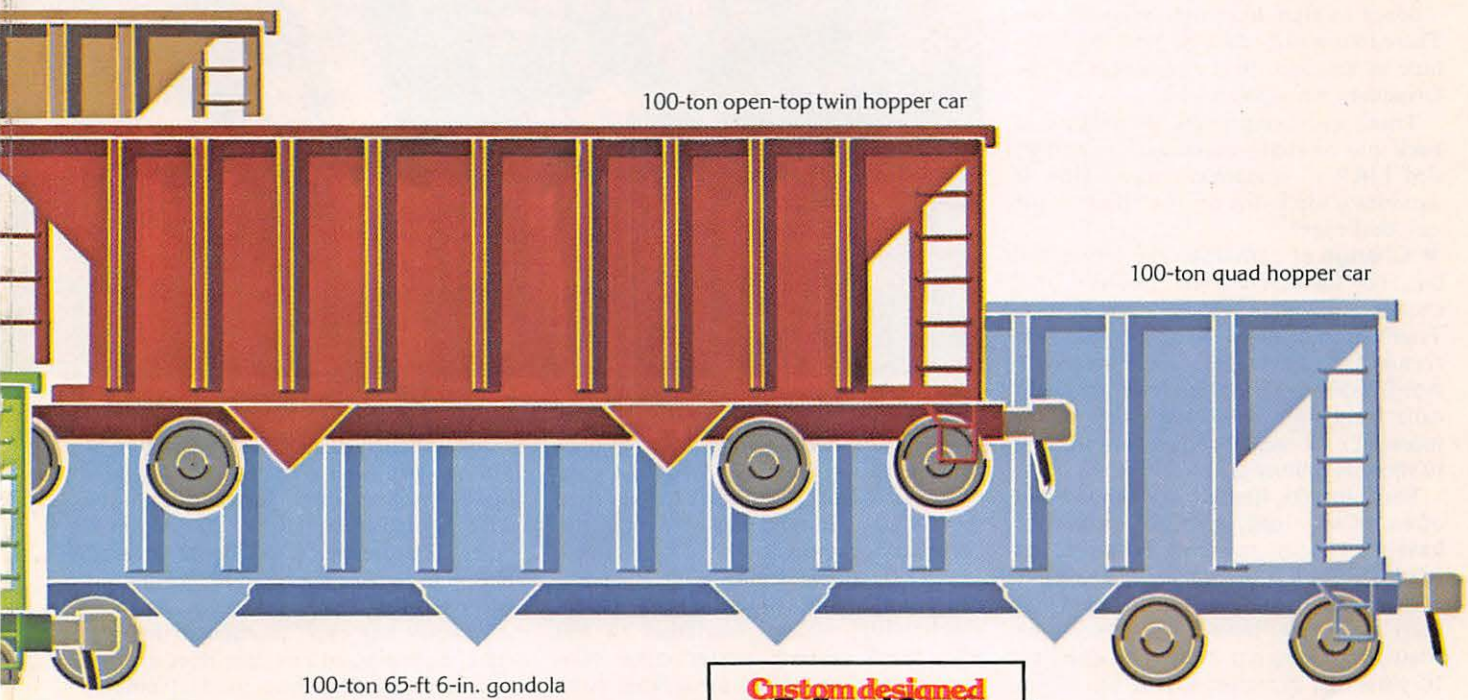

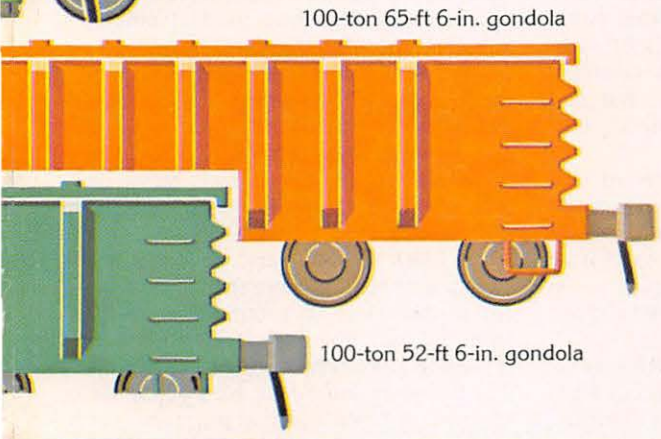

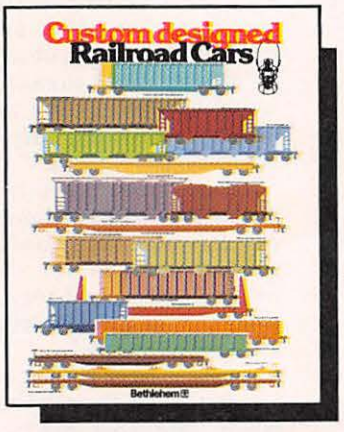

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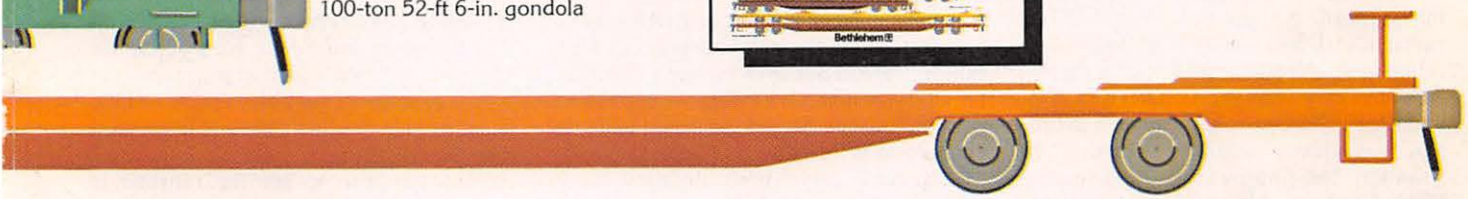

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LIRR: A slow game of catch-up

Up until Aug. 11, 1978, when he became the 28th president of the Long Island Rail Road, Francis S. Gabreski had seldom encountered a situation he could not master. In World War II, he destroyed 31 enemy fighters in the air and three more on the ground to become the top American air ace in the European Theater. A few years later, in Korea, he became history's eighth jet-age air ace. In 1967, Colonel Gabreski retired from the Air Force with a breastful of 17 U.S. and half a dozen foreign decorations and awards. There followed a relatively peaceful interlude as assistant to the president of the Grumman Aerospace Corp.

Then, nine months ago, Gabreski went back into combat—as head of the embattled LIRR's management team. How is America's top living air ace rising to the new challenge?

● **Change at Jamaica.** The jury is still out, but there is already evidence of a change at Jamaica. Cars are cleaner. Trains are posting a better on-time performance (an average of 88.4% early in April). Gabreski is getting fewer midnight calls from irate commuters, and in his morning mail some bouquets are starting to show up among the brickbats.

But Gabreski, himself a commuter and often an irate one, does not pretend to have worked any miracles. He's the first to say that he has so far been able to make only a small dent in the barriers that still keep the Long Island from becoming what then-Governor Nelson Rockefeller 10 years ago promised that it was about to become: "The finest commuter railroad in the country"

Rockefeller made that panicky promise at a time when his reelection chances were thought to be seriously jeopardized by the mess the Long Island had fallen into. An able management team headed by Thomas M. Goodfellow had disintegrated; hard-to-replace men such as Chief Mechanical Officer Jack Brannan had left the property. The railroad was wracked by labor strife; maintenance all but stopped. At one time over half the railroad's electric trains were being cancelled daily. Nearly a quarter of a million New Yorkers ride the LIRR every day, and their collective roar of anger a decade ago was clearly heard in Albany. The situation has improved since then, but Rockefeller and his chief transportation advisor, Dr. William J. Ronan, were never really able to make good on the reelection-year promise.

● **Needed: $2.3 billion.** Gabreski—who was picked to run the LIRR by Harold Fisher, Ronan's successor as head of the New York State Metropolitan Transportation Authority—has not gone so far as to call the railroad the worst in the country. But he *has* said publicly, "Our service stinks."

LIRR's service stinks, says its president, for a number of reasons: equipment unreliability, which contributes to less than ideal on-time performance (Gabreski's goal is 95%); antiquated communications systems; obsolete shops; lack of adequate car storage and cleaning facilities, to name just a few. But the overriding problem, says Gabreski, has been capital starvation.

"The railroad has been neglected too long. Our capital investment program today is all but nonexistent," says Gabreski. "We're now trying to play a catch-up game. And playing catch-up is going to take an awful lot of time and an awful lot of money."

An awful lot of money, as LIRR sees it, is something in the neighborhood of $2.3 billion, spread out over the next 10 years. Of that amount $1.3 billion is needed to cover what the railroad considers to be its short-term priority needs (see next page). These needs have been itemized in a capital-needs program that is now before the General Assembly in Albany.

● **The $5-billion alternative.** The go/no-go decision lies in Albany because the Long Island is a state-owned railroad. It was purchased—lock, stock, and 300-plus miles of line—from the Pennsylvania Railroad in 1965 for $65 million at a time when the alternative was a going-out-of-business sale. At that time the state figured it would take 26 additional lanes of expressways and more than $2 billion to replace the railroad's rush-hour carrying capacity.

Nobody has ever questioned that the state made a good buy, nor does anyone seriously complain about the $110 million in annual subsidies that must be added to LIRR's $140 million of revenues to pay for the cost of operating the nation's busiest passenger railroad. The cost of 26 lanes of expressway today would be closer to $5 billion, and the interest alone on that would be double the cost of running the railroad.

But LIRR's commuters, while they are paying only slightly more than half of the cost of their rides, do complain, in a well-sustained roar, about the levels of service. It is partly in response to these complaints that Gabreski and Fisher are pushing for approval of LIRR's capital program.

The problem is not only, Fisher emphasizes, to give the line's present customers a better ride for their (and the taxpayers') money, but also to get the railroad in shape to handle bigger passenger loads in the future. Despite its well-publicized problems, LIRR is steadily gaining new customers. It collected 72.4 million fares in 1978, nearly 3 million more than in 1977. The annual rate of increase is now in excess of 5%.

"Our service stinks. . . Playing catch-up is going to take an awful lot of time and an awful lot of money."

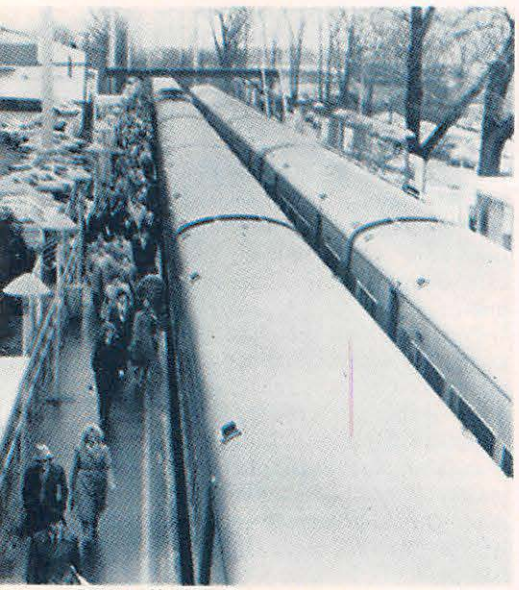
LIRR President Francis S. Gabreski

LIRR: *Priority short-term needs*

Project		Cost (millions)	Duration of planning and construction
West Side storage yard		$ 100.0	8 years
100 new M-3 electric cars now (total of 424 cars needed over 10 years)		100.0	3 years
Equipment maintenance facilities		326.4	10 years
Modernize existing shops	$ 21.4		
New shop complex	287.0		
Other items	18.0		
Passenger information aids and communications		28.1	5 years
Modernize Jamaica interlocking and switching network		300.0	7 years
Modernize Harold interlocking and switching network		150.0	7 years
Initial electrical extensions (Huntington to Northport and Hicksville to Ronkonkoma)		84.0	5 years
Modernize Penn Station switching and passenger access		82.0	9 years
Centralized operations control		60.0	10 years
Platform extensions and station improvements		98.0	9 years
	Total	**$1,328.5**	

10-year car needs

	New M-3 electric cars	Daily passengers benefiting
Continued growth to 1982	100	21,000
Continued growth to 1986	92	19,500
Electrification extensions:		
Huntington to Northport	32	6,500
Hicksville to Ronkonkoma	80	17,500
Northport to Port Jefferson	44	9,000
Babylon to Speonk	46	9,500
East Williston to Oyster Bay	30	6,000
Total	**424**	**89,000**



Port Jefferson Branch passengers must change from a diesel-hauled train to an electric at Huntington to get to New York. LIRR wants to electrify east of Huntington.

"I think we'll get the money," says Fisher. "If the oil crisis is real—I emphasize *if* because I don't know—but if it's real, mass transit is going to have to pick up a lot of new riders. If we don't get the help we need, we're all in trouble, real trouble."

● **100 cars now, more later.** For LIRR's 245,000 daily riders, the most visible improvement, if the capital program is funded, will be a flood of new equipment pouring on line. LIRR says that by 1982, it will need to add 100 new electric cars to its present fleet of 764, just to provide seats for the 3,000 riders who are now standees and "also to serve a portion of the 17,000 additional commuters anticipated by 1986."

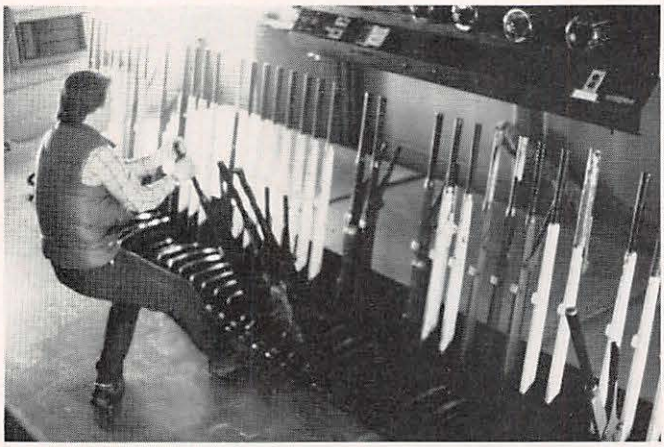
LIRR also sees a need for 324 additional cars over the next 10 years—92 to cover continued passenger growth, and 232 to be phased in when five proposed electrification extensions are completed.

The railroad estimates that the cars will cost around $1 million apiece. Who will build them?

The Budd Co. would seem to be the most likely candidate. Budd supplied most of LIRR's present fleet of electrics (General Electric was the prime contractor for the final batch, but these were actually assembled at Budd's Red Lion plant in Philadelphia). The Budd name is in good standing these days at Jamaica. The railroad experienced numerous problems with the Budd cars—but these problems, believes Gabreski, originated not with Budd but with the people who prepared the specifications.

But Budd will not have an open field. MTA Chairman Fisher recently invited Franco-Belge, the French carbuilder, to make a presentation to the authority's board, noting that MTA would soon be in the market for both LIRR and New York City Transit Authority cars, and adding that he was "concerned by the uncertainty of car manufacturing in the U.S."

● **First priority: A storage yard.** While



The block operator at Nassau Tower in Mineola must use brute strength to move mechanical switches at this busy interlocking.

LIRR wants to update this Movement Bureau at Jamaica so that it can communicate with passengers anywhere on the system.

the need for additional cars is urgent, it is not No. 1 on LIRR's priority list. That spot goes to a mid-Manhattan West Side storage yard.

"The most important element in increasing and improving service is the construction of a car storage yard west of Penn Station," says LIRR. "The new 320-car yard would permit a 25% increase in the number of passengers that can be served through Penn Station, helping to meet projected LIRR ridership demands in the 1980s and 1990s as energy costs escalate. During the morning and evening rush hours, an additional 31,000 passengers would be carried."

Mechanical failures continue to plague the railroad. Of 4,008 trains that ran late in a recent month, LIRR estimates that 40.6% were delayed by mechanical breakdowns. To produce a quantum improvement in this situation, LIRR is asking for $326.4 million for maintenance facilities, including $287 million for a new shop complex.

High on Gabreski's own priority list—and No. 4 on the official list—is improved passenger-information aids and communication, budgeted at $28.1 million.

"An essential element to a smooth operation and improved passenger information is good communications. The existing Long Island radio system is in need of modernization and expansion. Ten-year-old on-train radios should be replaced by ones which can withstand continued operation in the third-rail electrified environment." (Motorola has already been called in by LIRR to work on that problem.)

Two big items in the proposed capital program are modernization of the interlocking and switching networks at Jamaica, "the major bottleneck for 145,000 morning and evening rush-hour passengers," and at Harold (adjacent to Sunnyside yard), the railroad's main switching facility through which all trains en route to and from Penn Station must pass. The Jamaica project is budgeted at $300 million, and the Harold interlocking at $150 million.

Only two of the electrification extensions that have been talked about for so long—from Huntington to Northport, and from Hicksville to Ronkonkoma—are on the short-term priority list, for a total of $84 million.

Completing the list are Penn Station switching and passenger access modernization, $82 million; centralized operations control, $60 million; and platform extensions and station improvements, $98 million.

For a railroad that has recently been getting by with annual capital programs in the $2-3 million range, the new program is big and costly. Gabreski has moved swiftly and skillfully to enlist community support for the plan. "He's a past master at public relations and he uses gimmickry unashamedly—but successfully," says one associate. One gimmick that has paid off handsomely, according to Long Island newspapers, is Gabreski's "Engineer for a Day" program, in which commuters (who just happen to be, sometimes, influential opinion leaders) are invited to ride in the locomotive cab.

Gabreski's own identification with his customers is also paying off. After recording, with amazement, Gabreski's comment on the odor of the railroad's service, *Newsday* columnist Jack Altshul observed, "With management like that, there may be hope yet for the old LIRR. . . . Commuters have a chance with Francis Gabreski. At least he knows a problem when he sees one. And recognizes the smell." ■

One million rail clips on LIRR

Aqueduct and Belmont aren't the only tracks on Long Island. The Long Island Rail Road, with 327 miles of line, has 710 miles of track.

Late last month LIRR President Francis S. Gabreski drove the one millionth Pandrol rail clip into position on one of the main tracks at Woodside (photo). The 999,999th clip, painted gold, was already in position on the field side of the rail.

The Long Island is using the Pandrol fastenings, usually associated with concrete ties, on wood ties, and has installed them in about 70 miles of main-line track. By year's end, the total will surpass 90 miles. Base plates are fastened with Bethlehem lock spikes.

The new fastening system "gives us an increase in track modulus," says Chief Engineer John Woodward, "and reduces plate cutting, avoids gauge widening, and prevents 'spike kill' when changing rail." The system costs more, he says, but is expected to pay off in reduced maintenance as well as quality of track.

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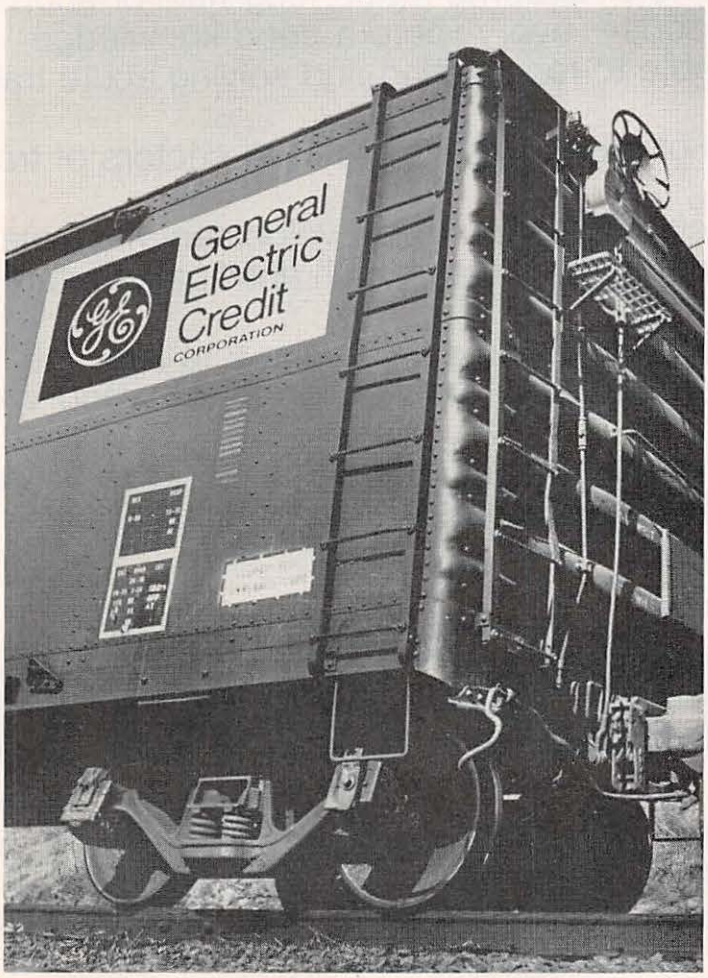

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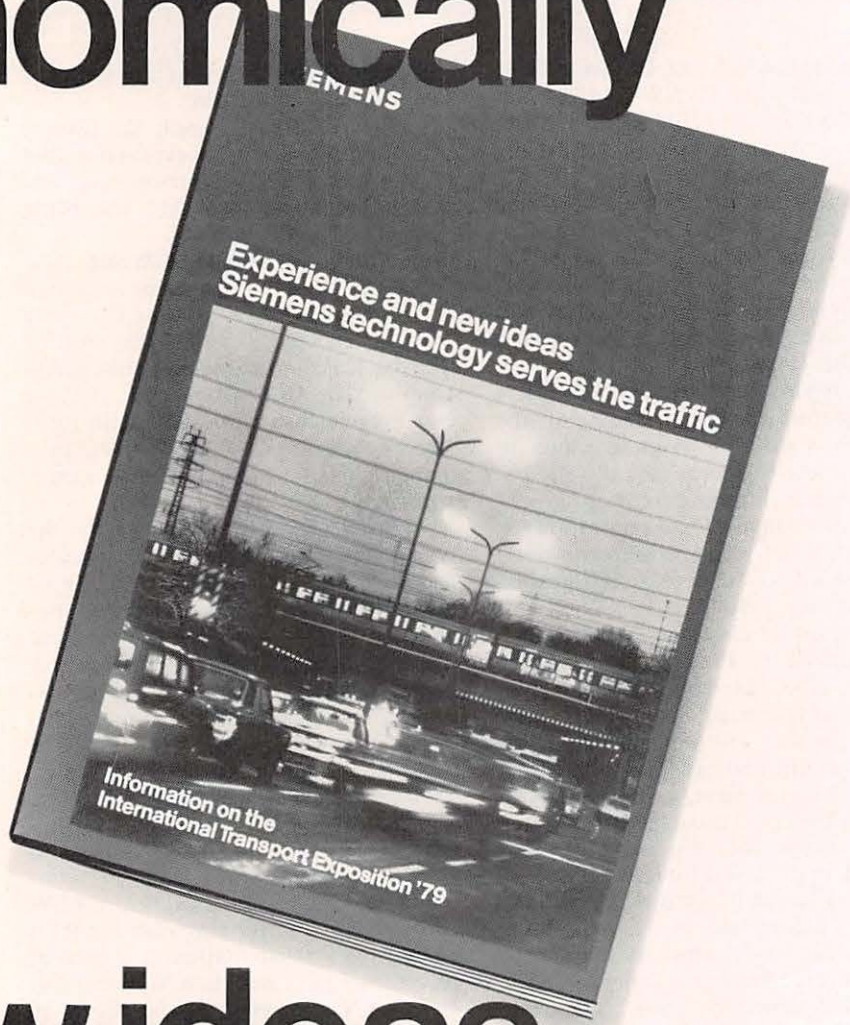

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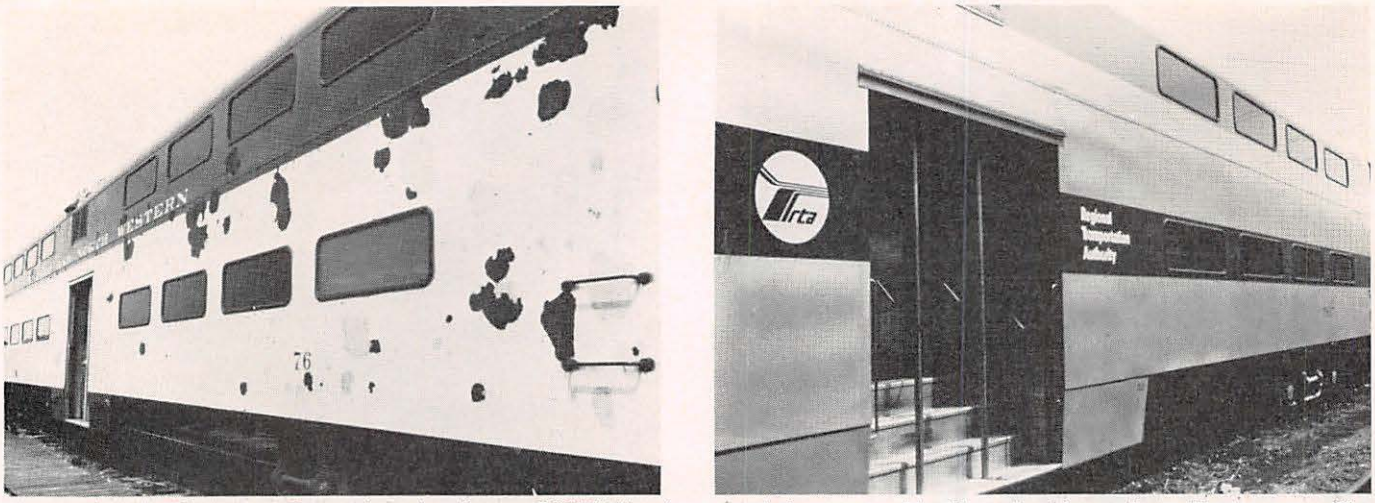

Worn and eroded from over 20 years' service, former C&NW bilevel cars are being renewed inside and out for perhaps 15 years more life.

Chicago: RTA renovates a commuter fleet

The fleet that helped make Chicago famous as a commuter town is being rehabilitated, after as much as 24 years of faithful service. In its first major program for renovation of existing rolling stock, the five-year-old Regional Transportation Authority is rehabilitating 48 bilevel commuter cars formerly owned by Chicago & North Western, some of which went into service in 1955. Renovation of another 102 C&NW cars will start later this year, and around mid-1980 the program will take on the remaining 96 cars. By late 1981, the entire 246-unit fleet, including 60 cab cars for push-pull operations, will have been renovated.

As of May 4, five renovated bilevels were back in service with new RTA colors of brown, orange, and silver-blue instead of the green and yellow that has signified outstanding commuter service for nearly a quarter of a century.

"This is a very important example of the concept of getting more out of what you have," says Theodore G. Weigle, Jr., Urban Mass Transportation Administration regional director, Chicago. UMTA is funding 80% of the program's costs, the Illinois Department of Transportation 13%, and RTA the remainder.

RTA officials say it's a little too soon to know for sure what the total cost will be, though an RTA press release announcing the first rehabilitated car said $40,000 per unit. That was merely a preliminary estimate, says Thomas G. Bourne, mechanical engineer, who points out that the cost will vary according to the condition of each car, but likely won't be much more than half of the announced cost. That would mean a final program cost of between $5 million and $10 million. "We could barely get 30 new cars for that amount of money," Bourne emphasizes.

How much life the renovation process will add depends on the effect of deferred maintenance, which, an UMTA official says, started when C&NW sold its commuter fleet to the RTA in early 1978. However, about 15 years of added life seems to be a safe guess.

Age and maintenance problems seemed to have caught up with the once-flawless fleet this past winter. While all of the Chicago area's transit operations were affected (*RA*, Feb. 12, p. 12), C&NW had more serious mechanical problems than some other roads.

● **A four-step renovation.** The work is being performed by personnel at the C&NW's California Avenue shops in Chicago, where, Bourne says, "we're going through a learning curve right now." It's the first commuter car renovation for the shop, which also specializes in rehabilitating C&NW cabooses, refrigerator cars, and auto rack cars.

"Each car is almost a custom job," says Edward T. Peterson, general car foreman-shops. He says the renovation process has four basic steps (though early in May he was still adjusting that process): (1) strip and sandblast, (2) prime for painting, (3) paint, and (4) complete work on the car. Through the first three stages, components are being cleaned, repaired, or discarded for replacement.

The big target is corrosion, especially around windows and in the skirt sheets beneath the doors, which Peterson says are the worst areas of the entire car. Skirt sheets are generally being completely replaced.

Also being replaced or rebuilt are such things as door motors, wear pads on trucks, rotted wood behind vestibule panels, seat covering, canvas diaphragms, air conditioning, shock absorbers, truck tie-rods, springs, and power cables. Seat arms are put through a strong cleaning solution and returned. Painted interiors are completely stripped for repainting; vinyl interiors get a thorough cleaning. Trucks are removed and completely reworked.

Launched in early April, the process was being refined for an eventual output of two cars a week, Peterson says. For that, a second 30-man shift was being formed.

● **Mixture of vintage bilevels.** The first batch of C&NW cars to be renovated will include 16 St. Louis Car Co. units that entered service in 1955 and most of the first 32 Pullman Standard units dating from the late 1950s. A number of those cars became push-pull cab units in 1961. Age of the entire 246-car fleet, Pullman Standard units predominantly, ranges from nine to 24 years.

"They were well-designed cars, for the type of service and for the abuse they've had to take," says Bourne. All are of Corten steel with stainless steel trim. They are used in RTA's biggest service area, the north-northwest-west areas of metropolitan Chicago. On three C&NW lines serving these areas, ridership is more than 90,000 each weekday. An 11% growth is projected through 1990.

There are even older bilevels in RTA service, 13 Budd units built 1953-54, but they were part of an overall Burlington Northern rebuilding program in 1973-74.

The program for renovating C&NW cars is part of a five-year plan for RTA rolling stock rehabilitation, budgeted at an estimated $17.8 million. It would also cover C&NW locomotives and bilevels in use on other railroads. The program extends over fiscal years 1979-83, with $4.5 million budgeted for FY 1980, beginning July 1.

The five year plan also includes $17 million for rolling stock replacement and another $81.5 million for rolling stock expansion. The total five-year capital budget for commuter rail, including $79.2 million for track improvements, is estimated at $309.4 million. ■

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Un réseau de gaines calorifugées permet de diffuser l'air sous les baies par diffuseurs-éjecteurs. La régulation entièrement électronique, permet de maintenir une température intérieure à ± 0,5 °C.
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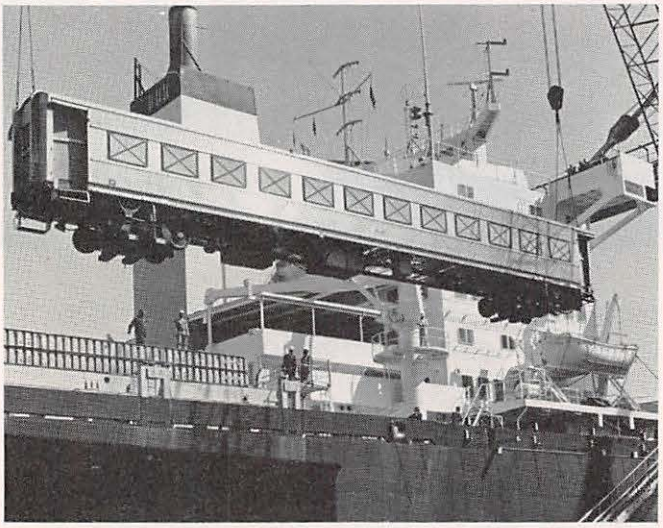
Moving People

BUFFALO GETS READY FOR TUNNELING

The Niagara Frontier Transportation Authority says Buffalo is now "into construction" of the nation's first all-new light rail transit system—a 6.4-mile line that is scheduled to carry its first revenue passengers in May 1984. Right now Buffalo is getting ready for the most challenging part of the undertaking—the machine-boring of 3½ miles of twin rock tunnel. Two preliminary tasks are now under way: (1) construction of a new parking lot on the campus of the State University of New York at Buffalo, northern terminus of the line, to replace a parking lot that is being acquired for a major construction site and future station location; and (2) installation of a pipeline that will carry off an estimated 16 million gallons of water a day from a water table in the rock strata through which the tunnels will be driven. Excavation for the start of tunneling is scheduled to begin early this summer.

NEW BUDD CAR TO BE SHOWN AT HAMBURG

A completely assembled "International Railcar" has been shipped by the Budd Co. to West Germany, where it will be exhibited at the International Transport and Traffic (IVA) Exposition in Hamburg June 8-July 1. The 109-seat car weighed in at 49,000 pounds as it was hoisted



aboard the *Koln Express* April 20. Budd points out that the car can also be shipped in prefabricated form anywhere in the world for local assembly.

PHILADELPHIA-HARRISBURG UPGRADING

Amtrak plans to spend $57 million during the next six years to upgrade its Philadelphia-Harrisburg line—and as a first step, Amtrak's board has approved expenditure of $2.1 million for work this year that will include replacement of 61,000 crossties and installation of 46,000 tons of new ballast. The overall project, which is designed to permit train speeds of 79 mph, calls for replacing and rebuilding of tracks, buildings, bridges, communications and signal systems, and overhead electrical wires, as well as the purchase of track machines. Top speed on the line is now 70 mph. In 1978, Amtrak carried 914,000 passengers on this line, which is also used by Conrail freight trains and SEPTA commuter trains.

SAN DIEGO ORDERS 14 GERMAN LRV'S

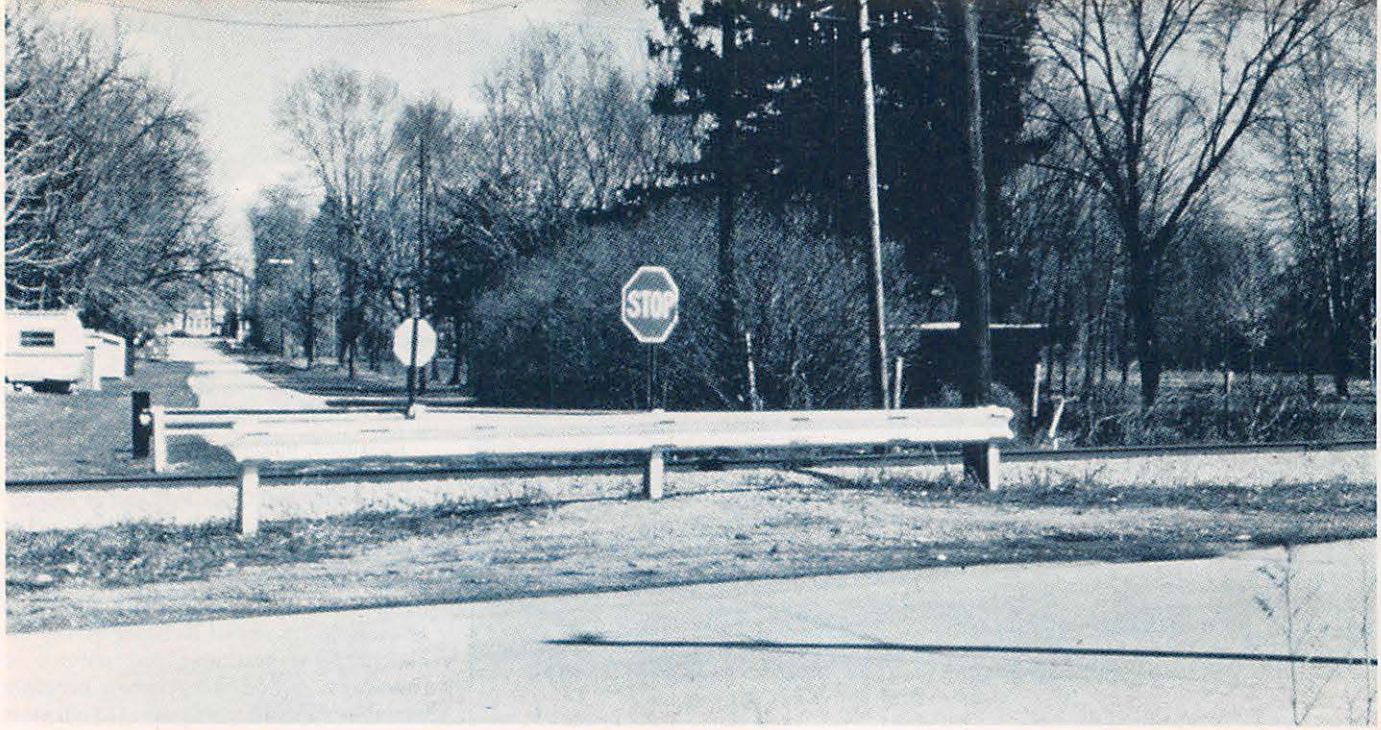
San Diego's Metropolitan Transit Development Board has ordered 14 light rail cars at a cost of around $650,000 per car for service on the San Diego-San Ysidro light rail line. The prime contractor is Siemens Corp.; the cars will be built by the West German firm, Duwag. It was a negotiated purchase for off-the-shelf equipment. Breda of Italy, which is supplying light rail cars for Cleveland, was the other and unsuccessful finalist. Companies in Belgium, Czechoslovakia, and Switzerland also sought the business. MTDB General Manager Robert Nelson says about 30% of the project has now gone through the final design stage, and more than 50% of the fixed price contracts have been awarded. Construction begins next fall; the line is scheduled to open July 1, 1981. The 16-mile light rail line will utilize 16 miles of the right of way of the San Diego & Arizona Eastern Railway. Total cost of the new line is estimated at $86 million.

THE WORD FROM AMTRAK: DEMAND IS UP

As the time neared for Congress to make a decision on the Department of Transportation's proposal for a 43% reduction in Amtrak routes, Amtrak was putting out the word that demand for its services was rising. The following paragraph appeared in a spate of news releases announcing various Amtrak schedule changes that became effective Sunday, April 29: "Amtrak's passenger demand has surged in recent weeks, with telephone call volume up nearly 30% and advance bookings for the system running 40% higher than last year."

PATH INVESTS IN SAFETY

The Port Authority Trans-Hudson Corp. (PATH) is investing $20 million in modernization and improvement of safety systems, emergency equipment, and evacuation procedures, says Peter C. Goldmark, Jr., executive director of the Port Authority of New York and New Jersey and president of its commuter rail subsidiary. The program calls for installation of emergency electrical equipment to provide alternate power for tunnel radio base stations and tunnel station public address systems; refurbishing seat cushions with fire-retardant materials (plus testing of a prototype fiber glass seat); structural modifications to improve evacuation and ventilation capability; and exploring the use of self-propelled vehicles for removal of disabled trains from tunnels.



Grade crossings: The closure option

By C. F. MULRENAN
Chief Engineer, Ways and Structures
Chicago South Shore & South Bend

Efforts to improve safety at specific railroad grade crossings are limited primarily to these options: installation or upgrading of passive (static) warning signs and of train-activated protection, building of grade separations, relocating of the railroad in the area, and closing the crossing altogether.

There are other safety efforts that cannot be directed to any particular crossing, such as improved driver training and licensing laws, stricter law enforcement, and continued research and development of new forms of crossing protection.

Within the five options applying to the crossing itself, public funding of the first four is extensive, effective, and well-documented. However, the fifth option, closing the crossing, tends to be neglected for a variety of reasons. It seems that the closing of crossings as a safety option is not widely discussed or written about in the railroad industry. For example, a review of reports published by the American Railway Engineering Association's Committee 9-Highways shows that over the last 10 years the subject of crossing closures appeared only once, in a "Summary Reporting of Significant Publications on Grade-crossing Safety."

Regardless of its lack of exposure, there are distinct advantages to closing a crossing that a railroad should not fail to investigate. As an option it provides a permanent and cost-effective solution toward preventing future crossing accidents—an achievement that can be matched only by grade separation or railroad relocation. Again, in terms of accident prevention, the closing of a crossing is obviously superior to the installation of train-activated flashing signals and gates. It also eliminates all future maintenance expense for both the crossing structure and crossing protection devices, whether they be active or passive types.

● **Protection costs rising.** This latter point cannot be ignored since the costs of maintaining train-activated crossing protection systems are increasing. In 36 states they are borne solely by the railroads. Overall maintenance costs include the recurring expense of renewing the crossing surface as well as those dollars absorbed by the reduction in the useful life of the track structure under the crossing. Experience on our railroad indicates that the useful life of a crossing track structure is 40% shorter than it would be in open track. Such reduction in life can be caused by poor drainage, winter salt, and vehicular loadings. Thus maintenance-of-way savings from closure are immediate and tangible.

Major disadvantages in pursuing a crossing closing program arise from the confrontation involved in both legal and political processes. The "Report to Congress—Railroad-Highway Safety Part II, Recommendations for Resolving the Problem," prepared and published in 1972 by the Federal Railroad Administration and the Federal Highway Administration, notes that jurisdiction over railway-highway intersections resides exclusively with the states. The responsibility for protection and maintenance, however, is frequently divided among several public agencies and the railroad. Inevitably, this results in a fragmentary approach to grade-crossing safety. The report points to the need for national coordination on this issue.

Yet, in many states the actual power for closure lies with the local political subdivision in which the crossing exists. Too often, where the local community holds the decisive sway, the closing of any crossing inconveniences voters, and is therefore politically sensitive.

Another disadvantage is inherent in the enormity of the problem. According to a 1978 FRA statistical summary, there are in the United States approximately 219,000 public at-grade crossings; 142,000 at-grade, but private; 37,500 public grade-separated crossings, and 3,500 pedestrian crossings. Of the public at-grade crossings, only 23% have active warning systems; the remainder are protected only with passive devices.

● **Improving safety, yet . . .** The AAR has reported that during the period 1967-77 there has been a 44% decline in crossing fatalities, from 1,520 to 846. This progress is encouraging. Over 3,000 train-activated warning devices were installed in those 11 years with federal funds; some additional installations were made with both state and railroad funding. However, while train miles have decreased by 13% during the same period, vehicular miles have increased 51%. This provides one of the statistical bases for a 31% increase in the index of exposure to fatal accidents along the nation's grade crossings.

If the authority to close a crossing resides with a state agency that has express statutory power and is backed by a policy favorable toward closure (as in Oregon), railroads will have a good head

Public grade crossings in the U.S. *

WARNING DEVICE CLASS		Urban (over 5,000 pop.)	Rural (under 5,000 pop.)	Total	% total
ACTIVE	Gates	8,850	3,849	12,699	5.8
	Flashing lights	19,295	14,886	34,181	15.6
	Highway signals, wigwags, bells	2,112	1,218	3,330	1.5
	Subtotals	**30,257**	**19,953**	**50,210**	**22.9**
PASSIVE	Special warning devices	6,019	1,613	7,632	3.5
	Crossbucks	46,825	94,546	141,371	64.5
	Stop signs	1,716	1,828	3,544	1.6
	Other signs	431	628	1,059	0.5
	No signs or signals	10,304	5,003	15,307	7.0
	Subtotals	**65,295**	**103,618**	**168,913**	**77.1**
	Totals—both classes	**95,552**	**123,571**	**219,123**	**100**

*Inventory status as of May 1978. Source: FRA

start in forming a viable closure program. Such a state agency will judge a petition to close a crossing simply on its merits. Its decision will be based upon the facts presented, with the public interest as a guideline, and generally will be free from narrow political concerns. However, there will still be legal barriers that must be faced.

Given a favorable environment for closure, the effort can still be messy, whether it be by state or railroad initiative. The process is tedious, time consuming, and negative in outlook, since it requires engineering and legal input on a crossing-by-crossing basis. Nevertheless, at the Chicago South Shore & South Bend, we have found the effort worthwhile. The experience gained from our program in Indiana can be of value to railroads in other states.

In Indiana, the railroads, together with other interested parties, were successful in securing legislation that became effective in 1973 whereby the Public Service Commission was empowered to abolish public grade crossings. This was predicated in the law "upon a finding that the enhancement of public safety resulting from the closing will outweigh any inconvenience caused by increased circuity of highway routes." In 1974, then, we filed petitions to close eight crossings. We received permission to close six permanently. Another was closed on an interim basis pending resolution of a flooding problem at a nearby underpass that was to serve as one of the major bypass routes. On the last, our petition was completely denied. Similar action was taken by other railroads operating in and through Indiana.

● **Comprehensive survey needed.** In determining which crossings to select for our petition for closure, we carefully checked existing alternate routes. Also, our survey served as the basis for analyzing convenience to the motorist. Besides increased circuity of the alternate route, factors here also included the effect on response times for emergency vehicles and the type of crossings and their protection systems on the alternate routes. We also included in our traffic engineering surveys a specific vehicle count, separating school buses from other types of vehicles, and counting even pedestrians. In preparing our case further we also assembled data on past accidents at the crossing site, train traffic volume and speed, and descriptions of restricted sight distances.

One of our engineers, who testified at the public hearing, provided photographs and area maps of the crossing location and presented the traffic count data in affidavit form. On the legal side, the attorney representing our railroad reviewed all the evidence that was to be given. With the engineer, he inspected the crossing and alternate routes before the hearing.

In retrospect, using the one engineer as the only witness for our railroad provided advantages. Particularly it limited opposing counsel at the hearing from cross-examining several less-experienced railroad witnesses and attempting to dismiss them on the basis of subjects deemed outside of their normal duties and technical expertise.

As things turned out, we found at the hearing that we were off the mark on what we had initially anticipated as some of the opposition's points against closure. Yet having done our homework, and making the information gathered available as evidence, we were able to maintain a flexible plan of action. For example, we were able to develop one compromise that included the adding of protection to alternate crossings. We also helped in the development of a frontage or connecting road from the old to the new crossing route.

Though logical, such a well-planned approach involves a potential legal disadvantage. The testimony of the railroad's expert witness at the hearing becomes part of the public record; as such it can thus be used by third parties in pending or subsequent litigation involving an accident or accidents at the crossing. However, the effect of this can be limited by prior review, with the railroad's attorney, of all aspects of the evidence that will be submitted at the hearing.

Balanced against this negative point however, is the reality that with the passing of every train, the railroad is still exposing itself to potential liability at the crossing. In the long view the closing of unnecessary crossings is both in the public's *and* the railroad's best interest.

● **How to go about it.** Based on our experience, the recommended pattern to follow for a desirable closure program would be something like this: If your state has retained the jurisdiction of closing crossings within one of its agencies, and the policy of that agency is generally favorable, designate an engineer and an attorney to select candidate crossings that will be part of an ongoing program. Build up your data, and first file the necessary petitions on the strongest cases only. But if the jurisdiction lies solely with the local community, the railroads and other interested parties should, as we did in Indiana, work to secure passage of legislation giving a state agency the express powers to close crossings after a finding of facts and public necessity—again to bypass resistance based on local political convenience.

Federal funds play a vital role in grade-crossing safety. The effort, then, should be made to amend regulations and add incentives that insure that the option for selective closure becomes part of considerations in the upgrading of train-activated crossings protection which is subject to specific federal guide lines. This would maximize the safety benefits derived from every dollar spent for new crossing signaling devices. Such a change in federal regulations would also encourage state and local highway engineers to work with their railroad counterparts in developing a systems engineering approach to a community's grade-crossing problem. This would be a major step in avoiding the current, less favorable, crossing-by-crossing approach.

Too, it should be made a clear public policy that the opening of any new grade crossing over main-line trackage is very rarely in the public interest. Finally, railroads should resist, by every available means, the establishment of any new at-grade crossings.

South Shore considers its program a success. Within a four-year period, by following the guidelines given, our railroad was able to close over 6.4% of main-track crossings. ■

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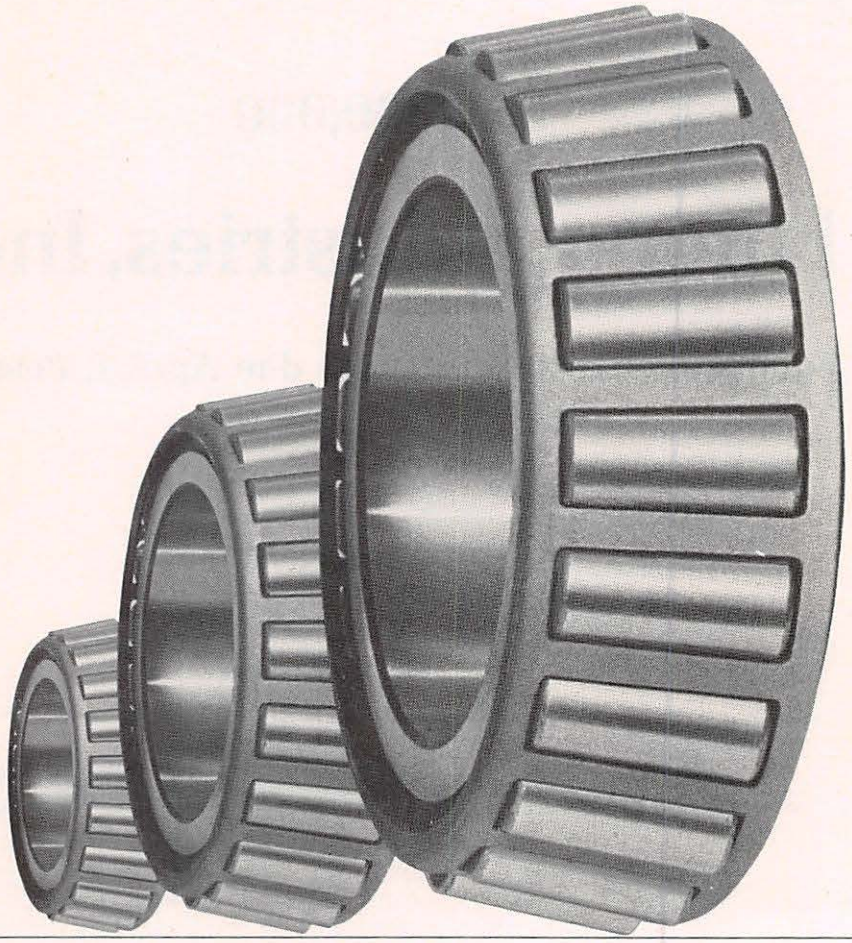

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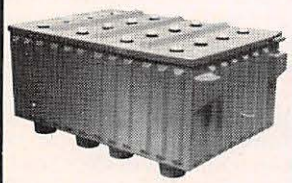

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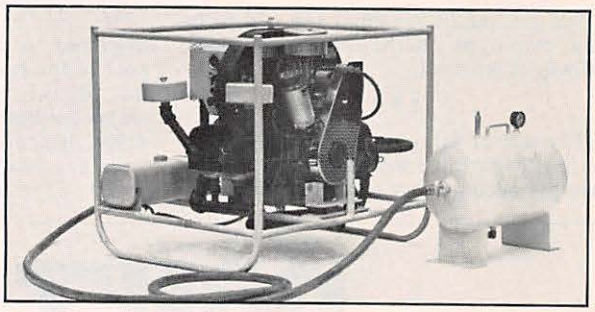

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INVITATION TO BID

The Tuscola & Saginaw Bay Railway invites bids from qualified contractors for the following work:

Contract #79U1

Project distribution and installation of 47,285 crossties distribution and laying of 22 track miles of relay rail; installation of 28 full sets of turnout timber; installation of 9 sets of relay turnout steel material; replacement of all road crossings in conjunction with rail relay.

Contract #79R1

Project replacement of 8 timber bridges with corrugated metal pipe or multiplate structures.

Contract #79R3

Project reconstruction of drainage ditches including removal of brush where necessary.

In order for successful bidders to be considered qualified, pre-qualification papers must be received no later than bid closing date. Contractors who have not already requested pre-qualification forms should do so immediately at the address shown below. Bids will be received until 10 a.m. EDT June 8, 1979 at the offices of the railway. Bids will be opened publicly at that time and place. Bid forms and information package should be requested from the following:

Bid Requests
Tuscola & Saginaw Bay Railway
538 E. Huron Avenue
Vassar, Michigan 48768

Pre-qualification and bid forms may be requested by telephone. 517/823-8331.

The Tuscola & Saginaw Bay Railway reserves the right to reject any or all bids and does not obligate itself by virtue of the advertisement to award the contracts above mentioned. In the event funding for the projects is not available, the Tuscola & Saginaw Bay Railway reserves the right to extend the deadline for receipt of bids or to withdraw the projects.

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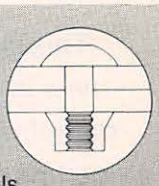

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Circle 16 on Reader Service Card

100 YEARS AGO IN

(May 1, 8 and 15, 1879)

Six thousand Chinamen are said to be now employed on the Southern Pacific railway in Arizona.

* * *

The use of labor saving machinery in various departments of railway construction has become very general, but hitherto it has not been applied directly to the work of tracklaying. A device called Moore, Coventry & Co.'s tracklayer is now offered to the railway public, and has already been successfully used on the Central Pacific, Illinois Central, Chicago & Alton, and other roads. It consists of the application of a system of adjustable ways, on each side of a train of flat cars, by means of which the rails are brought forward on one side and the ties on the other, in a continuous stream, and delivered to the track men on the exact part of the road bed where they are to be laid. By this ingenious method the use of teams for hauling the iron and ties is entirely dispensed with, thus doing away with a considerable portion of the expense of the ordinary method, as well as with the injury to the road bed by driving upon it. Moreover track can be laid in this way where the nature of the country would prevent the use of teams. It is claimed that by the use of the device from twenty-five to fifty per cent. more track per day can be laid than without it, besides the fact that it dispenses with all the teams and with one-third the number of men usually employed.

* * *

The Illinois legislature has passed a bill requiring railway corporations to maintain fences on both sides of their road and gates or bars at farm-crossings. The fencing is entirely proper; but if farmers leave the bars down or break the gate hinges, is the railway company to be prosecuted for not "maintaining" them?

* * *

An astonishing number of immigrants from Canada to Manitoba have passed through Chicago in the last few weeks. They are accompanied by their wives and children, their sisters, their cousins and their aunts, their horses, cows, pigs and chickens, and all their household belongings, and are evidently going to stay. They are a sturdy, thrifty class, who will do much to people and enrich the fertile valley of the Red river, which is now brought within easy reach by the newly opened railways. Canada's loss will be the gain of the northwest, and will furnish no inconsiderable business to the railways.

* * *

The Southern Pacific railroad is to be completed to at least as far as Tucson, Arizona, this year. From there the distance, due east, along the thirty-second parallel to the Rio Grande near El Paso, is about 300 miles, and the Southern Pacific company of New Mexico has just been incorporated to complete the line to that point. Meantime the Atchison, Topeka & Santa Fe company is pushing its New Mexico & Southern Pacific extension southward at the rate of a mile and half of track per day, and by July 4 will reach Las Vegas, opposite Santa Fe, and about 300 miles north of El Paso. This company however does not propose to build to El Paso, but to cross the Rio Grande at Sabino, near the thirty-fourth parallel, and thence run southwesterly, intersecting the Southern Pacific at a point apparently about forty miles east of the Arizona line and something like 175 miles from Tucson. Thus these great roads are rapidly nearing each other and by the end of this year their tracks will probably not be more than three hundred miles apart. The completion of the new trans-continental route may be expected before the close of 1880.

* * *

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Francis T. Sampson
Kerite

John B. Fleer
Kerite

Jerome R. Pier
WABCO

Holly Van Dine
L.B. Foster Co.

Suppliers

Phillip E. Pierce has been elected vice president-sales & service, signals and communications, **Safetran Systems Corp.,** Louisville, Ky. **Leland G. Phillips** has been elected vice president-staff, with responsibilities as secretary of the New Product Development Committee, maintenance of way sales and export sales.

Francis T. Sampson, western railroad sales manager, **Kerite Co.,** Chicago, has been named assistant vice president, railroad sales. **John B. Fleer,** assistant western manager, railroad sales, has been named western sales manager, railroad sales.

Jerome R. Pier has been appointed manager-business and product planning, **Westinghouse Air Brake Division, American Standard Inc.,** Pittsburgh. He was formerly manager-passenger transit marketing.

John G. Cannon, manager-product planning and analysis, has been appointed manager-strategic planning department.

Holly Van Dine, manager of public relations, **L.B. Foster Co.,** Pittsburgh, has been appointed manager-advertising and public relations. **Laurie Emerling** has been appointed products administrator, Washington Division.

Timothy M. Chilton, sales representative, Pittsburgh district, **Okonite Co.,** has been appointed manager-Cleveland district.

Gerald Hochheimer has been named executive vice president of a new corporation, **Strachan & Henshaw, Inc.,** 12059 South Western Avenue, Blue Island, Ill. 60406. He will be responsible for sales and manufacture of bulk material handling equipment, especially rail car dumpers and train indexers. Mr. Hochheimer was formerly with **Whiting Corp.**

Angus Mc Leod has been named to the new position of Canadian original equipment sales representative, **L & M Radiator, Ltd.,** Winnipeg, Man., Can. He will represent the company to OEMs and railroads.

Obituary

Arthur W. Canfield, retired manager of sales, **Pettibone Ohio Corp.** (formerly Cleveland Frog & Crossing Co.), died Mar. 27 in Cleveland.

Robert F. Coll, 55, transportation specialist for the **Federal Railroad Administration,** died April 5 in Washington.

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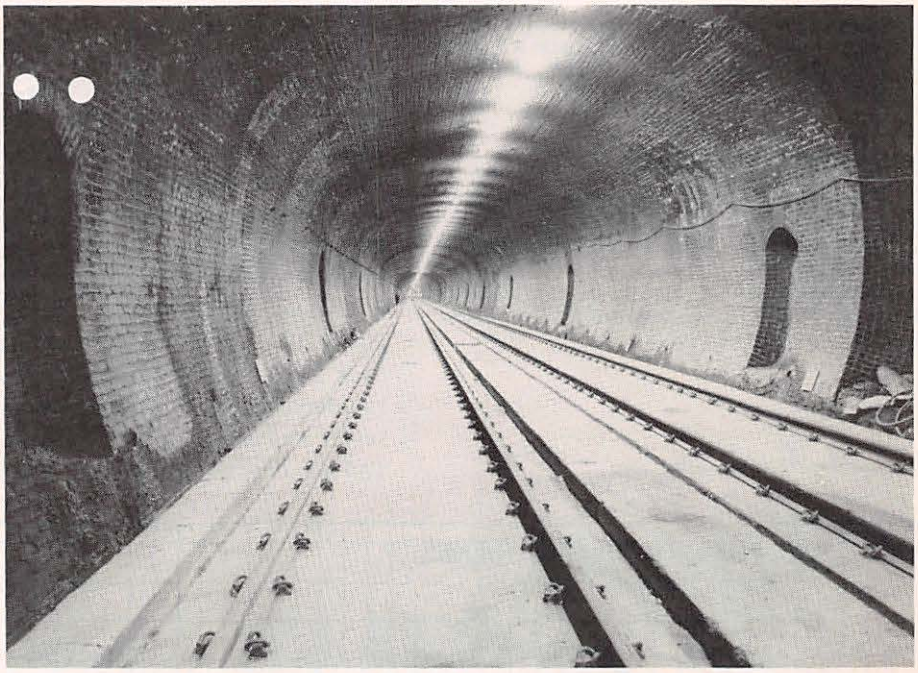

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Market

CARLOADINGS

Loadings of revenue freight in the week ended Apr. 21 totaled 484,302 cars, according to the Association of American Railroads. This was a decrease of 719 cars, or 0.1%, compared with the corresponding week last year. Ton-miles generated by carloadings in the week ended Apr. 21 are estimated at 17.9 billion, an increase of 0.9% above the corresponding week of 1978.

REVENUE FREIGHT CARLOADINGS

Commodity	Apr. 21 week	Apr. 14 week
Grain	23,954	23,315
Farm products	3,810	3,493
Metallic ores	30,796	31,216
Coal	111,454	106,380
Crushed stone, gravel & sand	17,938	16,740
Nonmetallic minerals	15,255	13,597
Grain mill products	17,645	17,208
Food and kindred products	18,334	18,200
Primary forest products	20,832	19,903
Lumber & wood products (except furniture)	12,422	11,989
Pulp, paper & allied products	21,853	21,772
Chemicals & allied products	32,588	31,350
Petroleum products	6,727	6,283
Stone, clay & glass products	19,902	18,137
Coke	8,156	7,846
Metals & products	22,907	20,859
Motor vehicles & equipment	24,614	20,901
Waste & scrap materials	14,636	13,809
Forwarder & shipper assn. traffic	13,219	12,929
All other carloads	46,807	45,655
LCL traffic	453	277
Total cars loaded	**484,302**	**461,859**
Cumulative total, 16 weeks	**1979 6,938,853**	**1978 6,423,990**
Estimated revenue ton-miles (billions) 16 weeks	**255.4**	**240.7**

PIGGYBACK LOADINGS

U.S. piggyback loadings for the holiday week ended Apr. 14 totaled 36,459 cars (0.3% below the corresponding non-holiday week of 1978) and 63,918 trailers or containers, virtually the same as last year. Cumulative volume for the first 15 weeks of 1979 is 520,859 cars (up 1.5% from 1978) and 923,760 trailers or containers (up 3.5% from 1978).

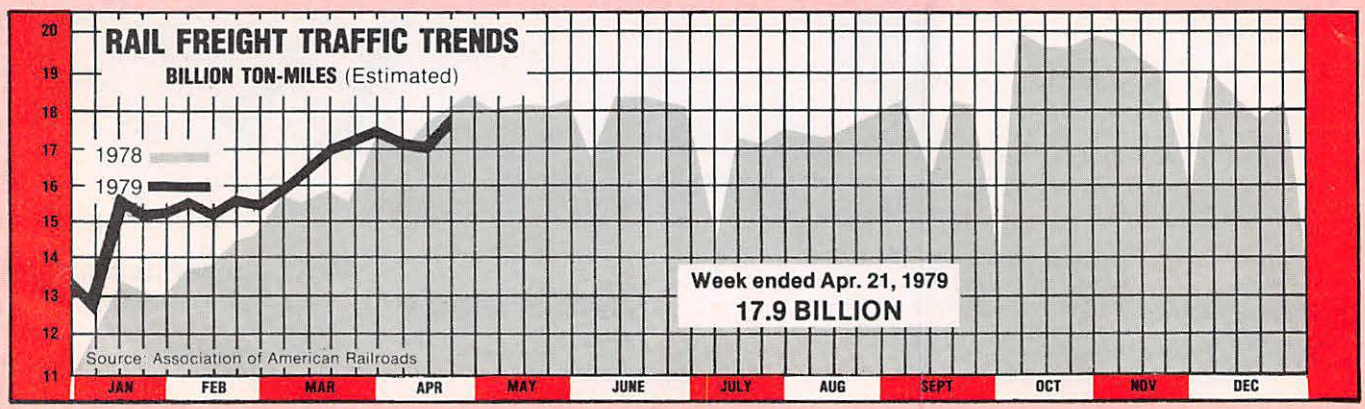
● *CP Rail.*—Will spend $191 million on improvements to equipment and plant in 1979. About $51 million will be invested in new locomotives, freight cars, and containers. An estimated $1.6 million will go for train communications equipment. The remainder will be spent on improvements to track, bridges, and other fixed facilities.

● *Chessie.*—1979 capital budget, totaling $165 million, covers acquisition of 70 new diesel-electric units, 1,004 freight cars, 146 cabooses and 400 piggyback trailers. Chessie also plans to spend $68 million for heavy repairs to nearly 13,000 cars and 650 locomotives.

● *Evans Products.*—Has received orders for 2,500 new freight cars valued at approximately $72.5 million, all for 1980 delivery. Itel ordered 500 gondola cars, and National Railway Utilization Corp. ordered 1,000 boxcars and 1,000 boxcar kits. John C. Felten, executive vice president of Evans and president of the company's transportation systems and industrial groups, says these contracts bring the group's backlogs for freight cars and components, truck trailers, and steel castings to a record level of $400 million.

● *Massachusetts Bay Transportation Authority.*—Plans to spend $50,149,673 on signal and communications improvements over the next four years, starting this summer. Signal work will include conversion of the Red Line between Harvard and Ashmont to cab-signalling, and modernization of the wayside signal system on the Blue Line and Central Subway and Highland Branch (Riverside) of the Green Line. The communications program calls for replacement of leased cable, used for radio and public address communications, with MBTA-owned cable on the Blue and Green Lines; installation of Private Automatic Exchange emergency telephone systems on the Red, Green, and Blue Lines; and installation of a systemwide bus radio network. An 80% federal aid application is being filed with the Urban Mass Transportation Administration.

● *Union Pacific*—Has contracted for 200 new diesel-electric units—the largest single locomotive order in the railroad's 115-year history. Electro-Motive will supply 160 units and General Electric 40. The new locomotives will range in price from $726,000 to $811,000; total cost is an estimated $153 million. Fifty are scheduled for delivery in fourth-quarter 1979, and 150 will be delivered in first-quarter 1980. The new order brings UP's investment in motive power to $373 million over the four-year period 1977-80, coming on top of 90 units purchased in 1977, 100 in 1978, and 150 ordered earlier for delivery this year. Said President John C. Kenefick: "We simply need more power to handle the rapid expansion of our freight business." He added that "last winter's severe weather put a tight squeeze on our existing fleet [of 1,587 units], and we don't want that to happen again."



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CONTRACT S-32206

Furnishing and Installing Emergency Communications Equipment for Control Centers, Borough of Brooklyn.

Sealed bids or proposals for (1) sale and delivery of emergency communications equipment for control centers and (2) installation of said equipment, Borough of Brooklyn, will be received by the New York City Transit Authority (hereinafter called the "Authority"), acting for and on behalf of The City of New York, at the office of the Authority at 370 Jay Street (11th Floor Conference Room), Borough of Brooklyn, New York City, until the 5th day of June, 1979, at ten (10:00) o'clock A.M., at which time and place the proposals will be publicly opened and read.

A fuller description of the work and other requirements, provisions, and specifications, including qualification requirements of bidders, are given in the Bid Documents issued by the Authority, all of which are to be deemed a part of this Invitation and copies of which may be inspected and purchased in Room 811, 370 Jay Street, Brooklyn, NY., 11201, at the price on file there.

A tour of inspection of typical sites at which the work is to be performed will be held at 9:30 AM on May 10, 1979. Prospective bidders who desire to attend shall notify the Signals and Communications Division office at 212-330-4300 not later than twenty-four (24) hours prior to the start of the tour.

This contract is subject to a financial assistance contract between the New York City Transit Authority and the United States of America, Department of Transportation, Urban Mass Trasnportation Administration, and in part to financial assistance from the State of New York.

All bidders will be required to certify that they are not on the U.S. Controller General's list of ineligible contractors for federally financed and assisted construction.

The New York City Transit Authority hereby notifies all bidders that in regard to any contract entered into pursuant to this Invitation to Bid, advertisement or solicitation, minority business enterprises will be afforded full opportunity to submit bids and/or proposals in response, and will not be subjected to discrimination on the basis of race, religion, color, sex, or national origin in consideration for an award.

The Contractor will be required to comply with Federal equal employment opportunity regulations.

At the time the bidder appears to demonstrate his financial ability and to qualify as to skill and experience, he will be evaluated as to his ability to comply with the Federal equal opportunity requirements. This evaluation will include an examination of the bidder's past performance in the equal opportunity area and an evaluation of the bidder's ability and plans to obtain participation by minority employees and businesses in the performance of the work pursuant to the Federal requirements of the contract. The Bidder's attention is directed to Article XVII entitled "No Discrimination", Article XVII-A entitled "Equal Employment Compliance", and Article LXI entitled "Bid Conditions — Affirmative Action Requirements — Equal Employment Opportunity", with which bidders, contractors and subcontractors must comply.

Award of contract will be subject to the approval of The City of New York, the Urban Mass Transportation Administration, The State Comptroller, and the New York State Financial Control Board.

New York City Transit Authority
By Harold L. Fisher
Chairman

Edward J. Babb,
Secretary

NOTICE TO CONTRACTORS

DIESEL LOCOMOTIVE PROCUREMENT
CONTRACT NO. XO-16-05

DATE: 5/10/79

Sealed Bids, addressed to the Mass Transit Administration, Contract and Procurement Department 109 East Redwood Street, Baltimore, Maryland 21202 and marked "Bids for Contract No. XO-16-05," will be received at the above address until but not after 10:00 A.M. Local Time June 28, 1979. At that time the Bids will be publicly opened and read aloud at the location at the same address. The work to be done under this Contract includes manufacture, inspection and testing, and delivery of one, 60 ton, four axle diesel hydraulic locomotive. The work also includes providing spare parts, special tools, publications and training Administration personnel in the proper operation and maintenance of the locomotive.

Each bidder shall have not less than a total of five years experience in the design and manufacture of diesel locomotives of comparable capacity and function to that specified and shall have such systems in satisfactory operation on a railroad or transit system.

Estimated value for this work is in the range of 300 to 600 thousand dollars.

Bid documents may be obtained on or after May 10, 1979, at the Administration's Contracts and Procurement Department at the above address, upon receipt of a check in the amount of $15, made payable to the Mass Transit Administration, which sum will not be refunded. Cash will not be accepted.

Each bid must be accompanied by a Bid Bond, on a form furnished by the Administration in the amount not less than 10 percent of the bid price. A Performance Bond in the amount of the total contract price will be required.

The Administration reserves the right to reject any and all bids and waive technical defects, if, in its judgment, the interests of the Administration so require.

Any contract resulting from the bids submitted is subject to a financial assistance Contract between the Administration and U.S. Department of Transportation.

All bidders will be required to certify that they are not on the U.S. Comptroller General's List of the Ineligible Contractors.

Bidders on this work will be required to comply with all applicable Equal Employment Opportunity laws and regulations.

A Pre-Bid meeting will be held on May 31, 1979 at 2:00 p.m. local time in the MTA administrations offices, 1st floor, 109 East Redwood Street, Baltimore, Maryland, for the purpose of explaining the procurement and answering questions of parties interested in contracting for the work. Questions regarding the Work should be directed by mail to B.K. Kirkpatrick or P.J. Schmidt at the Administrations offices at the above address or by telephone at numbers (301) 383-6038 and (301) 383-6037 respectively.

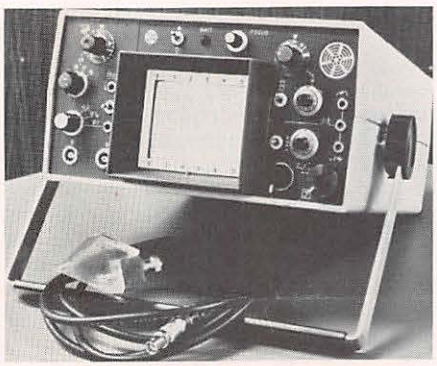
The Mass Transit Administration hereby notifies all bidders that in regard to any contract entered into pursuant to this advertisement, minority business enterprises will be afforded full opportunity to submit bids in response to this notice and will not be subjected to discrimination on the basis of political or religious opinion or affiliation, race, color, creed, sex, age or national origin in consideration for an award.

All bidders shall submit the Contractor's Questionnaire-Pre-Award Evaluation Data Form.

Any bid received after the time of date specified will not be considered.

Walter J. Addison, Administrator
Mass Transit Administration
Baltimore Region Rapid Transit Project

Products Report



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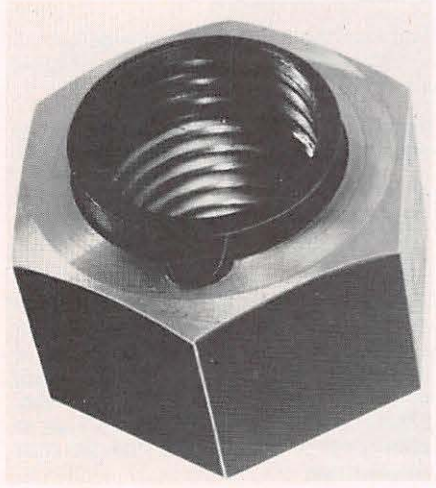

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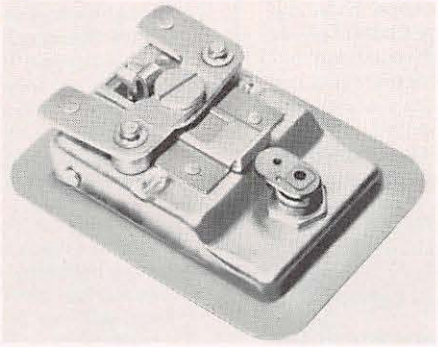
Circle 62 on Reader Service Card

High-pressure washer

A new portable, hot high-pressure washer offered by Tatge Chemical Co., the TOX-O-WIK Model 2400 will produce 240 gallons per hour of boiling hot water at 1,000 psi. Aquastat adjusts to vary water temperature. Has a stainless steel Tri-plex pump; 3-hp, 220-V single-phase electric motor; 40-foot discharge hose with energy-balanced wand and trigger bypass system.

Circle 63 on Reader Service Card



Slam-type lock

For use on all types of compartment doors on mass transportation vehicles or anywhere firm, two-point locking with spring-loaded end bolts is required, a simple, inexpensive slam-type lock is offered by Eberhard Manufacturing Co. Overall thickness of 1-$^{7}/_{16}$ inches fits the lock into tight quarters, and the recessed pan of the paddle handle receptacle permits easy installation with screws, bolts, or welding. Offered in four versions: Two have rods connecting the lever mechanism on the back of the paddle handle to the end bolts (No. 4972-82X is key-locking, No. 4973-82X is non-key-locking). The other two have cable connections for more flexibility of application (No. 4974-P9 is key locking, No. 4975-P9 non-key-locking). All available in 300 Series noncorrosive stainless steel.

Circle 64 on Reader Service Card

Weed and grass killer

A dry, granular weed and grass killer that can be sown by hand or with the Randustrial Weed Control Spreader is offered by Randustrial Corp. Nobrush controls annual and perennial grasses such as foxtail, rye grass, wild oats, crabgrass, cheatgrass, ragweed, goldenrod, plaintain, dandelion, smooth brome, Canada bluegrass and others. Degree and duration of control vary with amount used, soil type, rainfall and other conditions; generally, one application sterilizes the ground for one growing season. Available in 550-pound drums at $1.19 per pound, 300-pound drums at $1.24 per pound, 125-pound drums at $1.29 per pound.

Circle 65 on Reader Service Card

Digital microwave radio

Suitable for common carrier communications, a new 18-GHz digital microwave radio offered by Farinon Electric is designed for economical short-haul systems. The DMB18's digital modulation permits use of low-cost channel banks for voice or voice/data communications. When used with the new generation of switching machines, interconnection is possible without using channel banks. Completely solid state, the unit accepts Bell Standard DS-1 or

CLASSIFIED

The Long Island Rail Road Company intends to purchase **3 EMD F-7A Locomotive Bodies** *with standard EMD 4 wheel trucks and complete air brake system, suitable for shipping on their own wheels, to be without engine(s) etc.*

Quotations will be received until Railroad locates, inspects and accepts desired units. Copies of Quotation Form for **Inquiry No. 837,** *and further data may be obtained from*

Mr. W.A. Law, Manager — Contracts
Jamaica Station Building, Jamaica, New York 11435

PORT AUTHORITY
TRANS-HUDSON CORPORATION
PROPOSAL NO. 1646

Sealed proposals for furnishing 414 Steel Transit Car Wheels for the PATH Railroad System will be received at the Office of the General Services Department. The Port Authority of New York and New Jersey, One World Trade Center, Room 73N, New York, New York 10048, until 3:00 P.M., on Tuesday, May 29, 1979, at which time and place said proposals will be opened and read.

Contract Documents may be obtained at the Office of the General Services Department, upon request. (Contact Mr. M. Zodkoy at (212) 466-8196 or (201) 622-6600, Ext. 8196.)

PORT AUTHORITY
TRANS-HUDSON CORPORATION

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Priory Gate House
Church Hill
Orpington
Mr. Kenneth J. Hendry
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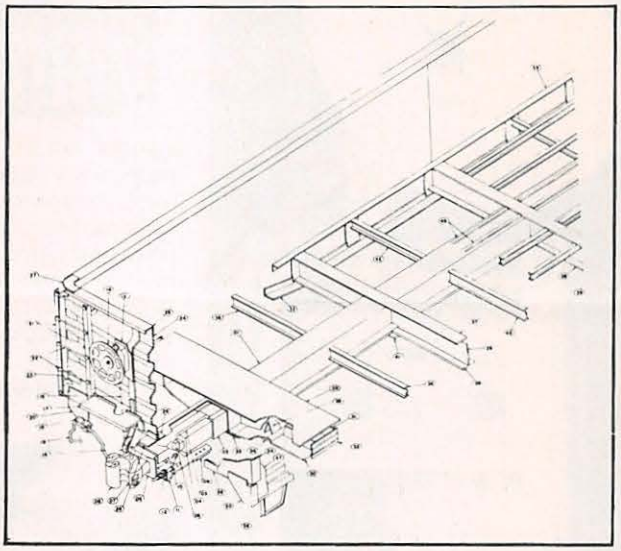
ADVERTISING INDEX

ACF Industries Inc. . . . 27
Air Industrie . . . 39
Amtrak . . . 16
Bethlehem Steel Corp. . . . 30
Brenco, Inc. . . . 44
CF&I Steel Corp. . . . 13
Difco, Inc. . . . 14
Drexel Burnham Lambert . . . 43
L.B. Foster . . . 11
General Battery Corp. . . . 45
General Electric Credit Corp. . . . 35
Harmon Industries . . . 18
Harry F. Ortlip . . . 5
Isringhausen . . . 9
The Kerite Company . . . 15
Lorain Products Corp. . . . 26
McGregor (Paving) Ltd. . . . 47
The Ohio Brass Company . . . I.B.C.
Pandrol Incorporated . . . 6
The Rails Co. . . . 45
Railway Educational Bureau . . . 53
Railway Systems Suppliers, Inc. . . . 46
Servo Corp. of America . . . 24
Siemens AG . . . 36
St. Louis Refrigerator Car Co. . . . I.F.C.
Townsend Fastening Systems . . . 45
United States Gypsum Co. . . . B.C.
Xtek/Pipe Division . . . 19

CAR CHARTS



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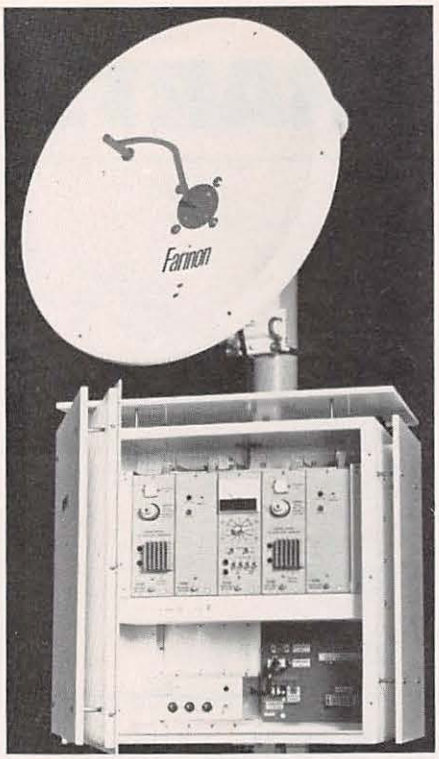

DS-2 line rates. The outdoor enclosure can hold two transmitters and two receivers for repeater or protected terminal applications; it adapts to a variety of mounting arrangements.

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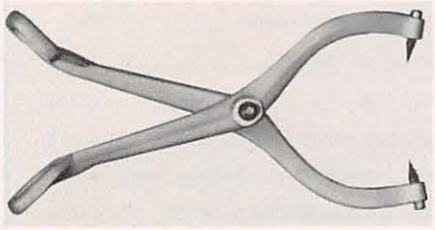


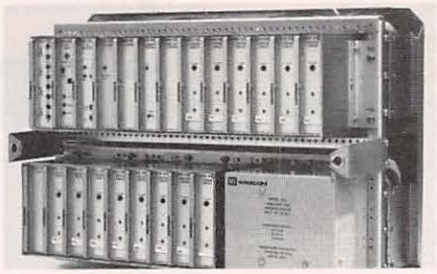
Aluminum tie tongs

New all-aluminum Tie Tongs offered by Safetran Systems Corp. provide a rugged tool with sharp, penetrating steel tips. Reversible halves are each one-piece; the carburized and case-hardened steel tips with elastic stop nuts and the pivot-point bolt, sleeve, and stop nut are all replaceable when worn. Tongs weigh 8 pounds, are 30 inches high (closed); jaws open to a maximum of 18 inches.

Circle 67 on Reader Service Card

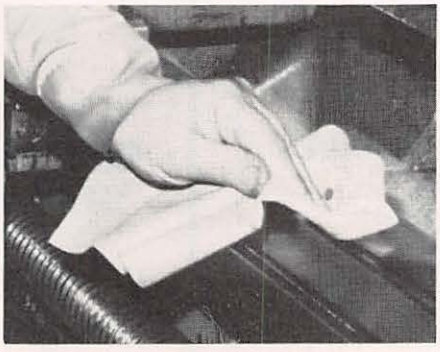
Selective signaling system

For signaling code-selected stations associated with 4-wire private line telephone facilities, Wescom's new 490 SS-4A Selective Signaling System may be optioned for one-, two-, or three-digit dial code capacities on either 2,600/2,400-Hz or DTMF networks; a maximum of 810 codes is available. Field optional to handle nonprivacy, manual privacy (except in DTMF line signaling configurations) or automatic privacy operation. Up to 54



stations can be ordered in standard arrangements without need for added common control modules. Each system is composed of connectorized-shelf building blocks for quick assembly of additions or new systems. Fully compatible with Wescom's 47C SS-1A System or with Western Electric SS-1, SS-1A, SS-4, and SS-3 systems.

Circle 68 on Reader Service Card



Nontextile wipers

For wiping grease, oils, and common solvents used in manufacturing and maintenance, a new bonded cellulose material offered by Scott Paper Co. feels and absorbs like cloth—but isn't cloth, and costs considerably less than rag wipers or rental towels. A WypAll wiper is soft and absorbs up to three times more liquid than a cotton-synthetic blend wiping rag. Its disposability eliminates laundering costs, counting and storing of rental towels, and danger to materials or personnel from metal chips that might not be removed in laundering. The nonwoven wiper tends to shear if caught in moving machinery, rather than being pulled into it. Wipers are 13 × 15 inches, packaged quarter-folded and shipped in 900-wiper cases. Dispensers available.

Circle 69 on Reader Service Card

Step-down adaptor

A large step-down adaptor for use with railroad and other equipment has a 2½-inch female square drive to a 1½-inch male square drive. Offered by Snap-on Tools Corp., the IM95 Adaptor is used with an impact wrench where increased torque is needed to loosen frozen fasteners. It is tested to withstand a maximum working torque of 5,000 foot-pounds. The Snap-on IM729R Lock Ring and IM-729P Lock Pin are needed for use of the adaptor.

Circle 70 on Reader Service Card

Switch plate lubricant

Sprayed with Switch Plate Lubricant offered by Joseph Dixon Crucible Co., switch plates are said to dry in seconds without attracting dirt, dust, or other abrasive matter that can wear out tough metal. They also resist journal drippings, which may collect abrasive material. May be sprayed or brushed on to help reduce switch maintenance and replacement costs.

Circle 71 on Reader Service Card

New Literature

SEARCHLIGHT SIGNAL. The GRS Type SA-1 searchlight signal, with precise color-disc positioning and daylight visibility of one mile is described in a new GRS Catalog offered by General Railway Signal Co.

Circle 80 on Reader Service Card

RUBBER CUSHIONING. A 12-page brochure on rubber cushioning devices and their uses in industry is offered by National Castings Division, Midland-Ross Corp.

Circle 81 on Reader Service Card

SURGE ARRESTERS. A 4-page color brochure offered by Ohio Brass Co. describes its new DynaVar station class surge arrester with metal oxide varistors.

Circle 82 on Reader Service Card

COMMUNICATIONS SYSTEMS. Granger Associates offers an 8-page brochure on the company and its communications systems and equipment.

Circle 83 on Reader Service Card

RADIO MULTIPLEX SYSTEM, the 36A2 providing up to 614 toll-quality voice channels for transmission over a microwave radio network, is described in a 7-page brochure offered by GTE Lenkurt, Inc.

Circle 84 on Reader Service Card

MEASURING INSTRUMENTS for insulation integrity, high and low resistance, earth resistance, speed, transformer turn ratio, partial discharge (corona), power factor, etc., are described in a 12-page brochure offered by James G. Biddle Co.

Circle 85 on Reader Service Card

ELECTRONIC COMPONENTS. A 40-page wholesale pricing guide to its electron tubes, semiconductors, integrated circuits, and computer equipment is offered by Thor Electronics Corp.

Circle 86 on Reader Service Card

OUTDOOR LIGHTING. ITT Outdoor Lighting offers a color catalog of its products (formerly marketed by ITT American Electric and ITT Landmark Lighting.

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O-B can convert electric power into motive power

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custom designed for specific applications

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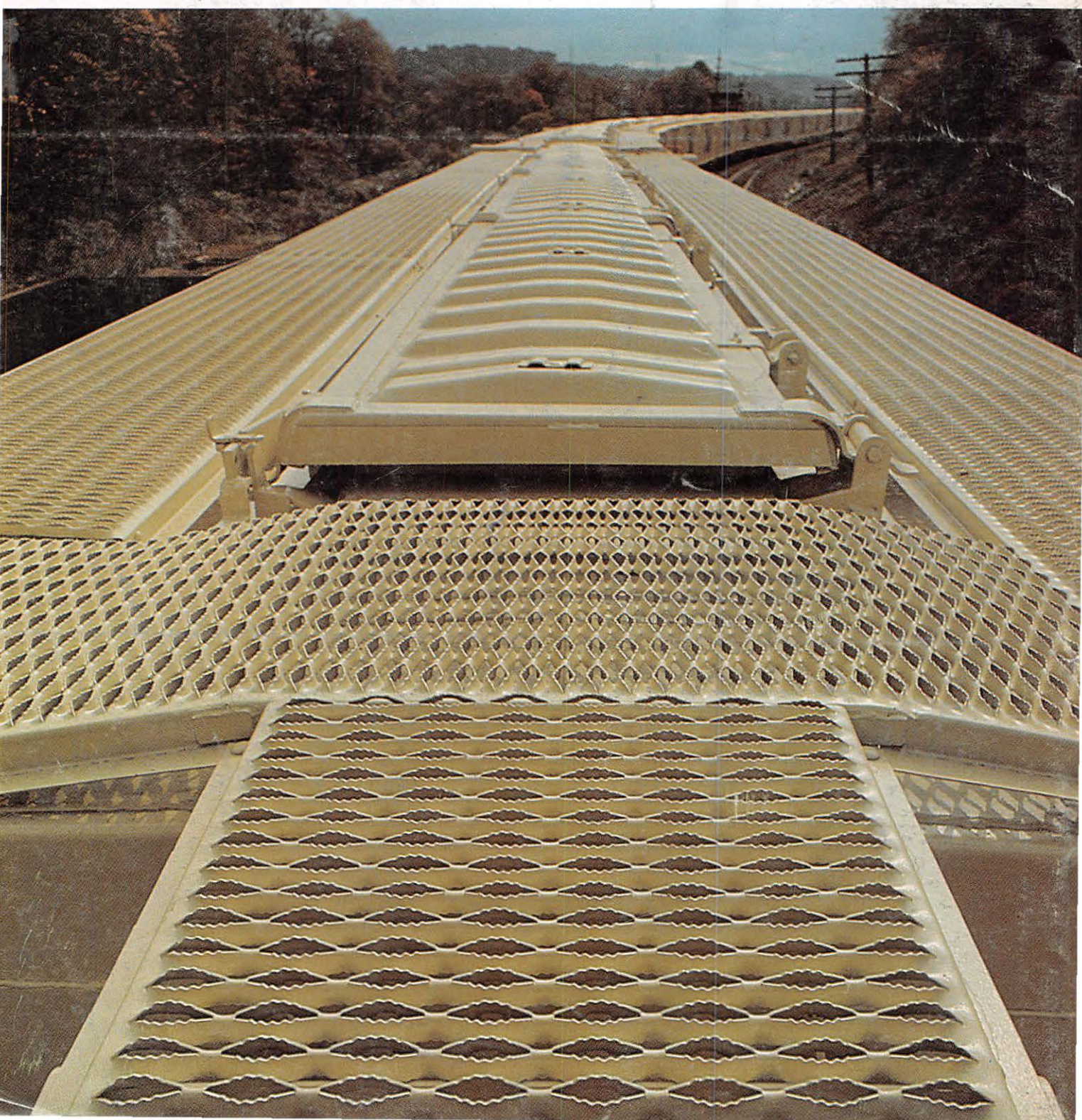
*In actual comparison tests with six conventional running board materials and industrial gratings

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